

Spiral® LP (Parking Structure) Installation Manual

Rytec installation safety information

The meaning of signal words



Technical content produced by Rytec includes safety information which must be read, understood and obeyed to reduce the risk of death, personal injury or equipment damage. This information is boxed to set it apart from other text. The boxed text identifies the nature of the hazard and appropriate steps to avoid it.

The safety alert symbol identifies a situation that can result in personal injury. The accompanying signal word indicates the likelihood and potential severity of the injury. The meaning of the signal words is as follows:

	⚠ WARNING Warning indicates a hazardous situation that, if not avoided, could result in death or serious injury.
	⚠ CAUTION Caution indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

Safety icons used in this manual



Shock hazard



Fall hazard



Crush hazard



Cut hazard



Forklift

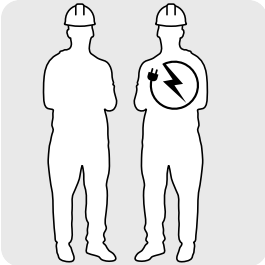
Installation safety

- **Do not install any Rytec product until** you have read and understood the safety information and instructions. Make sure all applicable regulations are observed and obeyed at all times.
- **Observe these precautions** while installing the door:
 - Only trained, qualified and authorized individuals are to install the door and the control system.
 - The installation site comprises the physical area required to safely uncrate, stage and install the door.
 - Make sure all personnel at the installation site have been informed of the date, time and location of the installation.
 - Make sure there is no pedestrian or vehicular traffic within the installation site for the duration of the installation.
 - Make sure you have and use all required Personal Protective Equipment.
 - Make sure you have adequate personnel and equipment to safely perform all lifts.
 - Make sure you have been informed of any hazardous conditions that exist within the installation site.
 - Make sure the installation site is kept clear of obstructions and debris and that the floor is dry.
 - Make sure you are aware of the location of all power lines, piping and HVAC systems within the installation site.
 - Make sure all accessories installed with the door are approved by the manufacturer.

Other icons used in this manual

IMPORTANT	Indicates instructions which, if not followed, could result in damage to the door or voiding of the warranty .	INSIDER'S TIP	Indicates best practice . This is how Rytec Technical Support does the job.
------------------	--	----------------------	--

Requirements – Staffing



- Two installers – three are recommended when the door panel is lifted.
- A licensed electrician is recommended for making all electrical connections

Electrician’s responsibilities

Refer to the Rytec System 4® Drive & Control Installation & Owner’s Manual for a complete list of the electrician’s responsibilities.

	⚠ WARNING Electrical work must meet all applicable local, state and national codes. Failure to wire the door correctly can cause shock, burns or death to the people who install, use or service the door. Failure to comply also voids the warranty for the door.
--	---

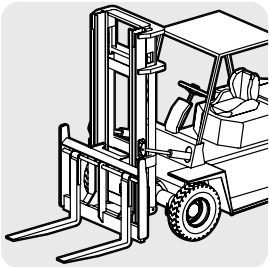
Requirements – Site Conditions

- Installers must have unrestricted access to the door opening at all times during the installation.
- Make sure there is no pedestrian or vehicular traffic within the installation site for the duration of the installation.

Requirements – Lifts

	⚠ WARNING A forklift is mandatory for the safe and proper installation of this door.
--	---

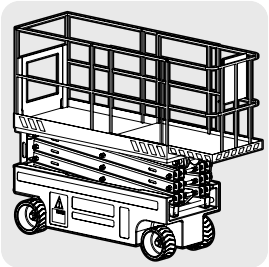
- **Forklift** that meets the following specifications:



- Minimum 4,000-pound lift capacity
- Minimum height ability: door height + 12"
- 48"-wide fork
- Side shift capability

	⚠ WARNING Follow all safety instructions on all lifts and ladders used for this installation.
--	--

- **Scissor lift** that meets the following specifications:



- Can hold both installers
- Minimum height ability: door height

- **Alternatively, two ladders** of sufficient height to safely access the door head assembly

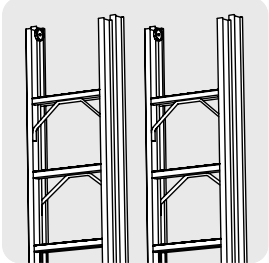


Table of Contents

Rytec installation safety information 1

The meaning of signal words 1

 Safety icons used in this manual 1

Installation safety 1

Requirements – Staffing 1

Electrician's responsibilities. 1

Requirements – Site Conditions 1

Requirements – Lifts 1

Other icons used in this manual. 1

Terms used by Rytec to describe the parts of the door 2

How to uncrate the door and inspect the installation site . . . 3

How to prep the consoles 5

How to prep the side columns. 6

How to center the door in the door opening. 7

Plumb, level, square: how to position the door correctly as you install the side columns 7

How to install the consoles. 11

How to install the drive tube 12

How to raise the vertical guide tracks into place. 13

How to install the horizontal tracks 14

How to install the door panel 16

How to attach the door panel to the secondary drive belt. 18

How to install the baseplate pulley assembly 19

How to tension the secondary drive belts 19

How to install the corner brackets and wireless antenna. 20

How to run the drive side cables for Pathwatch and light curtain 21

How to run the non-drive side cables for Pathwatch and light curtain 21

How to install the System 4 controller and wire the door 23

Before powering up the door 27

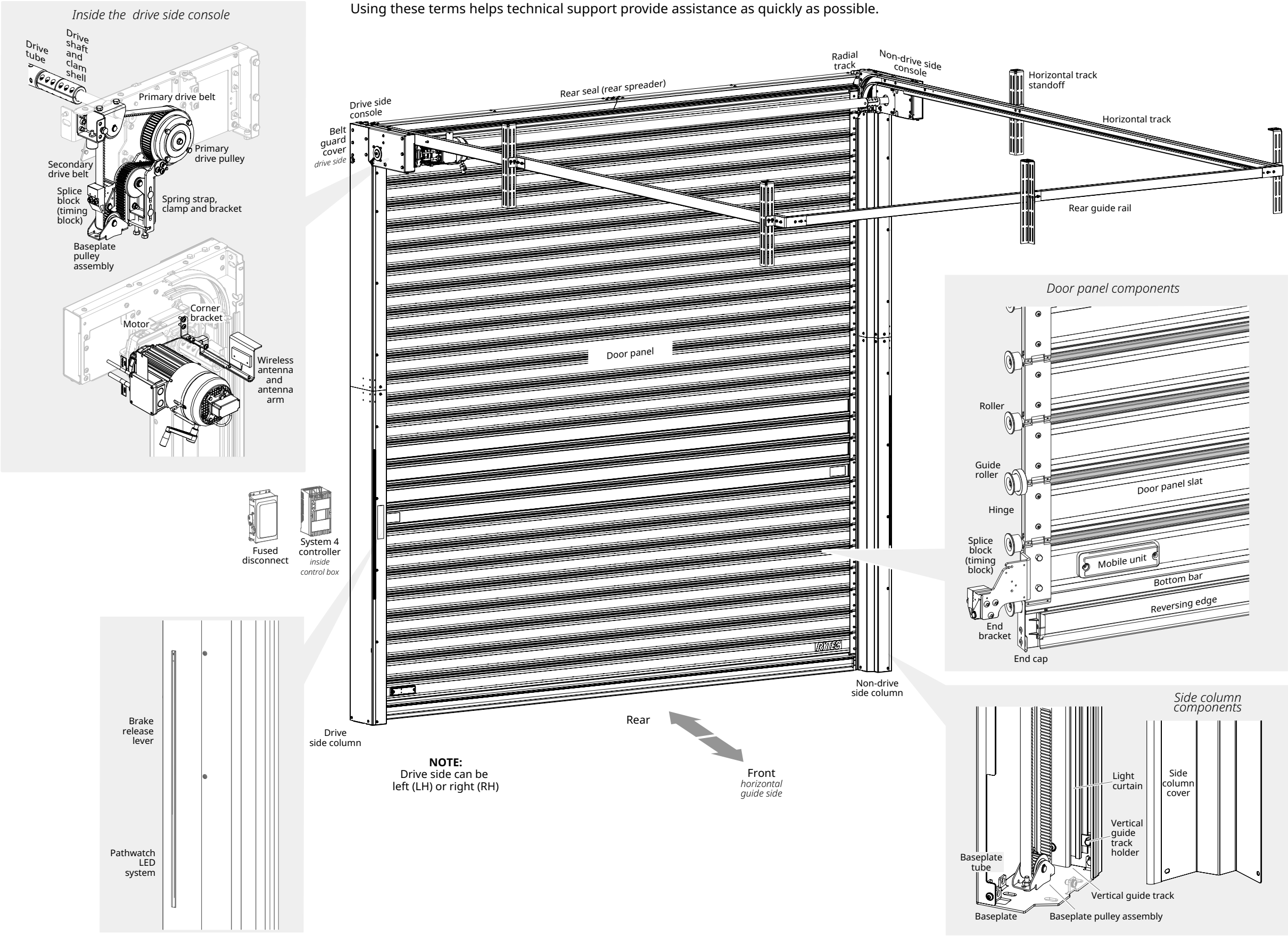
How to set limits and test the door 27

What to test after powering up the door 28

How to complete the installation 31

Terms used by Rytec to describe the parts of the door

This illustration shows the terms used by Rytec technical support to refer to the major components of your door. Using these terms helps technical support provide assistance as quickly as possible.



Spiral® LP (Parking Structure) Installation Manual

Call **800-628-1909**

or email **helpdesk@rytecdoors.com**

if you have any questions during this installation. See previous page for list of Rytec terms for the parts of the door.

How to uncrate the door and inspect the installation site

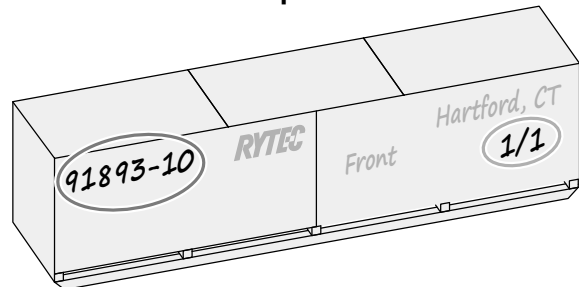
IMPORTANT

Spirals ship in one crate.

The crate is marked with the unique serial number for the door (red circle) and the number of crates used for the door (blue circle).

All parts for the door are in this crate.

If more than one door is to be installed, **treat each crate as a separate installation.**



Mixing parts from different doors voids the warranty for all doors in the installation.

1

Remove all top panels.

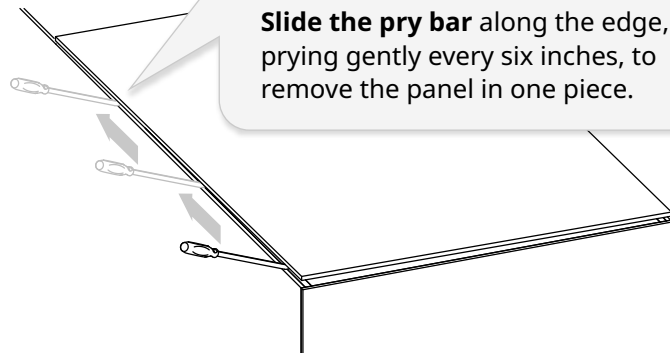


Pry bar

INSIDER'S TIP

Panels are made of fiberboard that shreds easily, and are secured with many nails.

Slide the pry bar along the edge, prying gently every six inches, to remove the panel in one piece.



2

Check the crates. Make sure all serial numbers match the number on the crate and all visible parts have no shipping damage.

Small parts box(es): check the serial number on side of box. There may be two boxes.

IMPORTANT

Open box, remove the red documents envelope, then open the envelope and get the object list (also called the cut sheet). Check serial numbers on both.

SMALL PARTS

Parts and hardware that you find in the box(es) will be called out in this manual as they are needed.

System 4 controller box: check the serial number on side of box.

Rear seal (rear spreader): check the serial number on green tag.

Door panel: on separate pallet. Requires forklift to remove.

Check the serial number on foam padding and manila tag.

Drive and non-drive consoles: shrink-wrapped and on separate pallet. **Requires forklift to remove.**

Indicate drive side: left (LH) or right (RH). LH is used for this manual.

Check the serial number written on shrink wrap.

Horizontal track standoffs

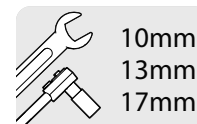
Driveshaft and horizontal guide rails/profile/covers

Side columns: check the serial number on the label.

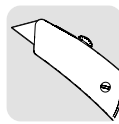


3

Check your tools. Make sure you have all tools and supplies for the installation.



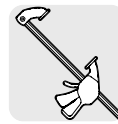
10mm
13mm
17mm
Socket or Open Wrench



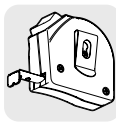
Utility knife



Laser Level



Bar Clamp



Measuring Tape



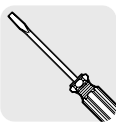
Spirit Level



Carpenter's Square



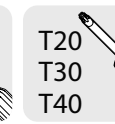
Precision Screwdriver



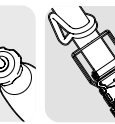
Flat Screwdriver



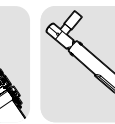
#2 Phillips Screwdriver



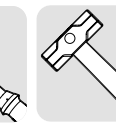
T20
T30
T40
Torx Screwdriver



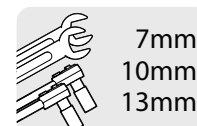
Ratchet Strap



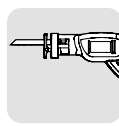
Torque Wrench



Mallet



7mm
10mm
13mm
Two Wrenches Needed



Sawzall



Angle Grinder



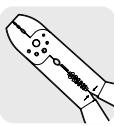
Anchoring Tools



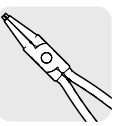
Cutting Pliers



Pry Bar



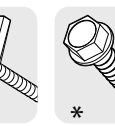
Wire Strippers



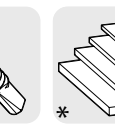
Snap Ring Pliers



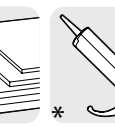
* You Provide
Anchoring Hardware



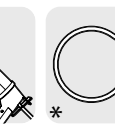
* Tek Screws



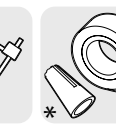
* Shims



* Caulk

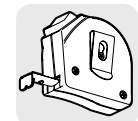


* Cable Ties



* Electrical Tape and Wire Nuts

4 Check the measurements. Make sure the door will fit in the installation site.



Tape measure

Object list		Description lists	
Duplicate		if door is small (-L, -L/R) or large (-S, -S/R).	
Material description			
SPIRAL STN-S			
MRP controller	500	Production scheduler	T6
BS ZMAT		Tier 6	
Status		Plant	
REL MSPT PRT PRC SETC		2000	
Serial number		Reservation number	
D0099760-010		0002596972	
Configuration		Creation Date	
DOOR MODEL NAME Spiral Low Headroom EV "S"		10/22/2019	
Door Width (Inches)			
216-142 216-3/16			
Door Height (Inches)			
101-969 102			
Production Width in mm			
3,490			
Production Height in mm			
2,590			
Door head size			
Line Voltage			
230V			
Motor mount side			
Left Hand Motor			
Motor Duty			
Standard Duty Motor			
Horsepower			
2.0			
Number of solid			
0			
Number of vent			
0			

Description lists if drive side is left hand (LH) or right hand (RH).

Write on object list:

① and ② as rounded fractions

Width to center = 1/2 ①

Total height = ③ + 2"

IMPORTANT

Spirals are built to metric specifications to a very tight spec. Round the Door Width and the Door Height to nearest 1/16 inch.

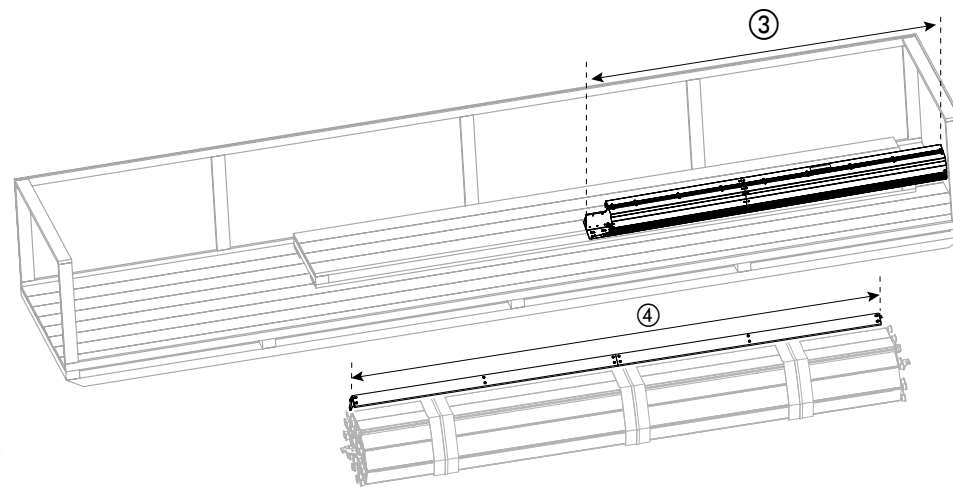
Decimal	.063	.125	.188	.250	.313	.375	.438	.500
Fraction	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

Decimal	.563	.625	.688	.750	.813	.875	.938
Fraction	9/16	5/8	11/16	3/4	13/16	7/8	15/16

1. Locate the Door Width ① and Door Height ② on the object list.
Round the numbers to the nearest 1/16 inch.
Write these numbers on the object list.
2. Measure the door opening to make sure:
 - The opening width equals the number on the object list ①.
 - The opening height equals the number on the object list ②.
3. Measure the rear seal (rear spreader) ④:
 - The length should equal the Door Width ① in the object list..
4. Calculate the total height needed for the installation:
 - Measure the height of a side column ③ in the crate.
 - Add two inches (2") to account for the side consoles and at least one inch (1") of clearance.

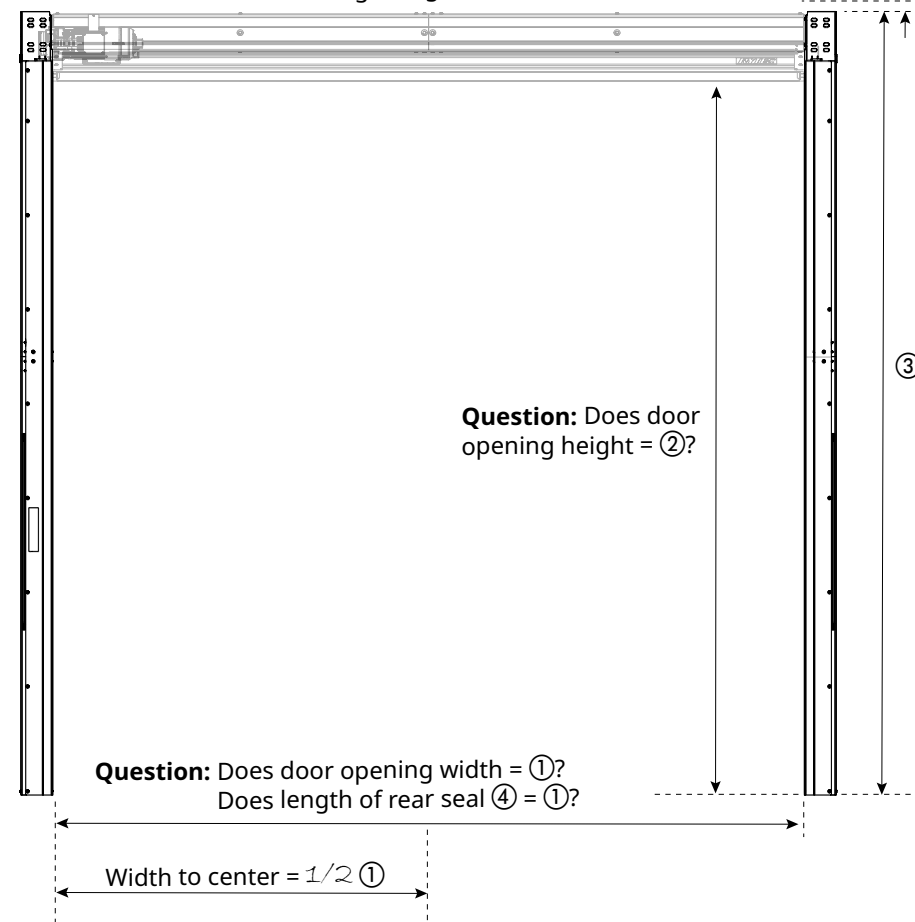
Write this number on the object list.
5. Make sure there is enough space to install the door:
make sure the site has space total height you calculated.
6. Calculate the width to center: divide the Door Width ① by 2.
Write this number on the object list. Use it when you center the door.

Call Rytec technical support at 800-628-1909
or email helpdesk@rytecdoors.com
if you have any questions about the measurements at the site.



Question: Is height of installation site > ③ + 2" ?
Is there enough height to install the door ?

Add at least 2" for console, clearance

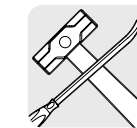


Question: Does door opening height = ②?

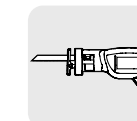
Question: Does door opening width = ①?
Does length of rear seal ④ = ①?

Width to center = 1/2 ①

- 5 If all checks are good, finish uncrating the door.
Starting at the center, remove the crossbars, then remove the front panel.



Mallet and pry bar or



Reciprocating saw

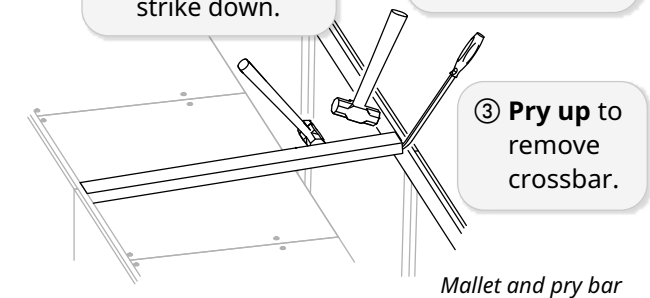
CAUTION

Flatten exposed nails as you go.
Keep hands clear while striking or cutting.

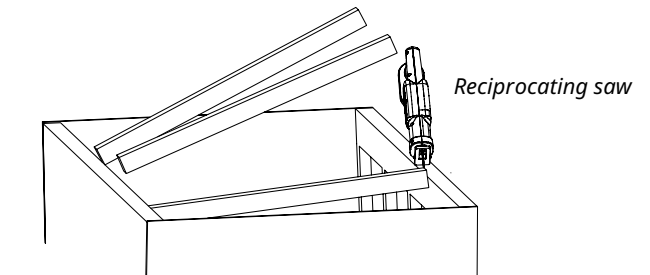
① Strike across the crossbar to loosen nails.
Do not strike down.

② Strike the side panel to expose nails.

③ Pry up to remove crossbar.

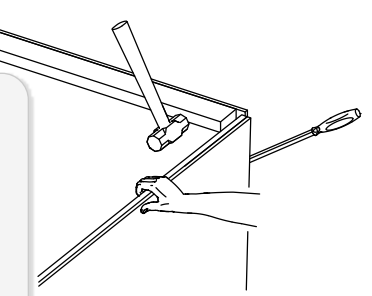


Mallet and pry bar

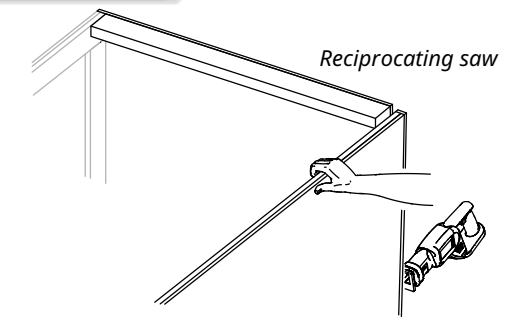


Reciprocating saw

End panels are nailed into the side panel.
Strike crossbar and pry end panel to loosen nails.
Pull side panel free from sides, then pull down to remove.



Mallet and pry bar



Reciprocating saw

How to prep the consoles

- 1** **Cut ties** so you can move any parts that block clear access to the console pallet.

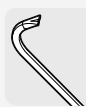
Use a forklift to move the consoles to an open space.

INSIDER'S TIP

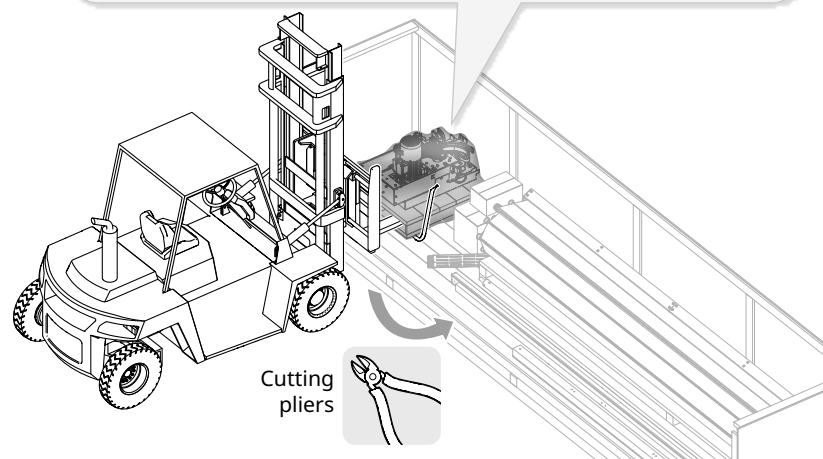
After the consoles are removed, **use the crate** to stage parts until they are needed.



IMPORTANT



Pallet is nailed to crate.
Use a crowbar to loosen the nails before lifting.



Cutting pliers

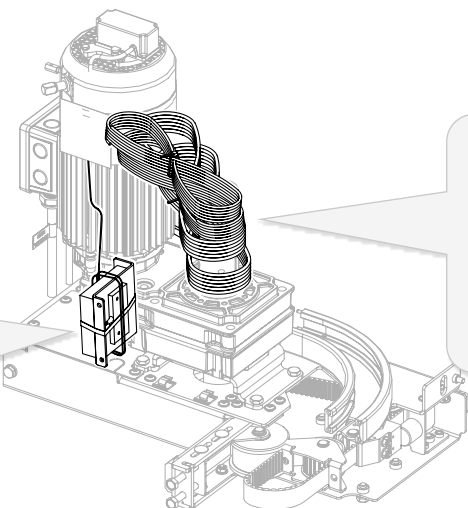
Things to know before you prep the drive side console

IMPORTANT

- The cables that are preinstalled in the drive side console **should not be repositioned, removed, or have the ties cut** until you are instructed to do so in these instructions.
- Make sure** all preinstalled cables, belts and straps are clear of the side columns when you lift the console into place, so that they are not crushed or crimped.

Drive side console

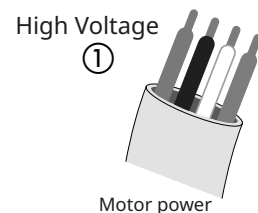
Wireless antenna: this is prewired to the encoder (inside the motor) and crated next to the motor.
Leave in place until it is time to install it.



Power cables: these are preinstalled, cable tied and placed on the drive shaft when the door is crated.

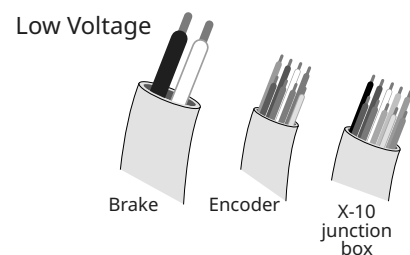
Wire colors are shown below ①.

Leave the coils in place until the console is installed.



High Voltage
①

Motor power



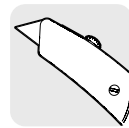
Low Voltage

Brake

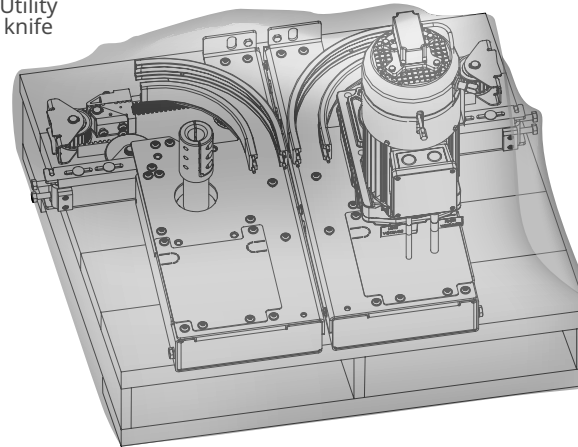
Encoder

X-10
junction
box

- 2** **Carefully cut** the shrink wrap and remove the drive side and non-drive side consoles.

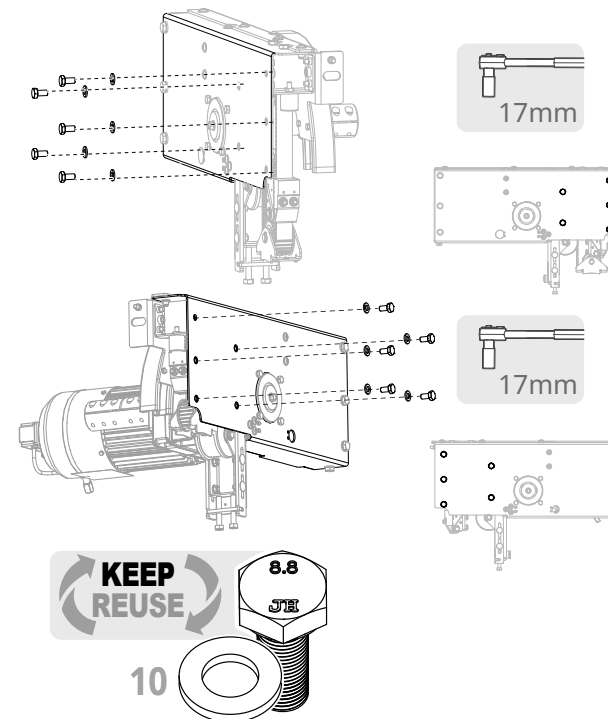


Utility knife



- 3** **Remove** the five preinstalled side column screws (located in the non-shaded area).

Do this on both consoles.



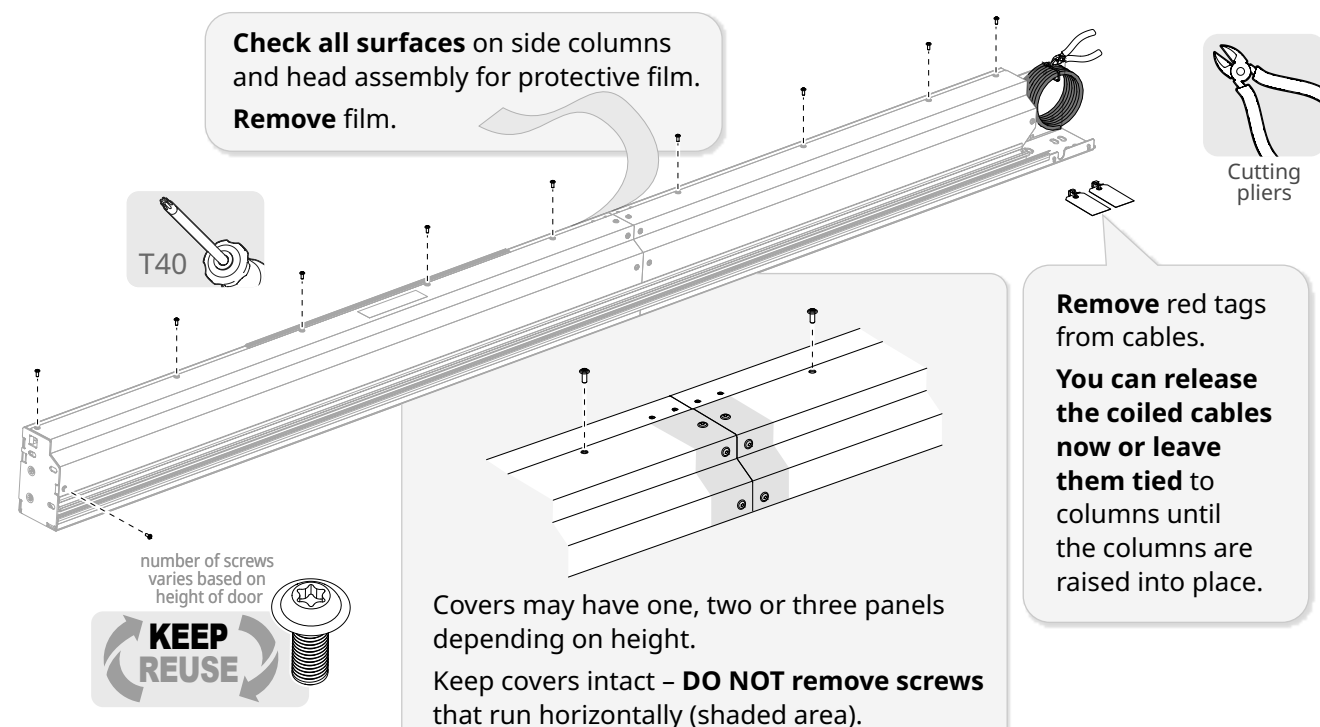
KEEP REUSE

10

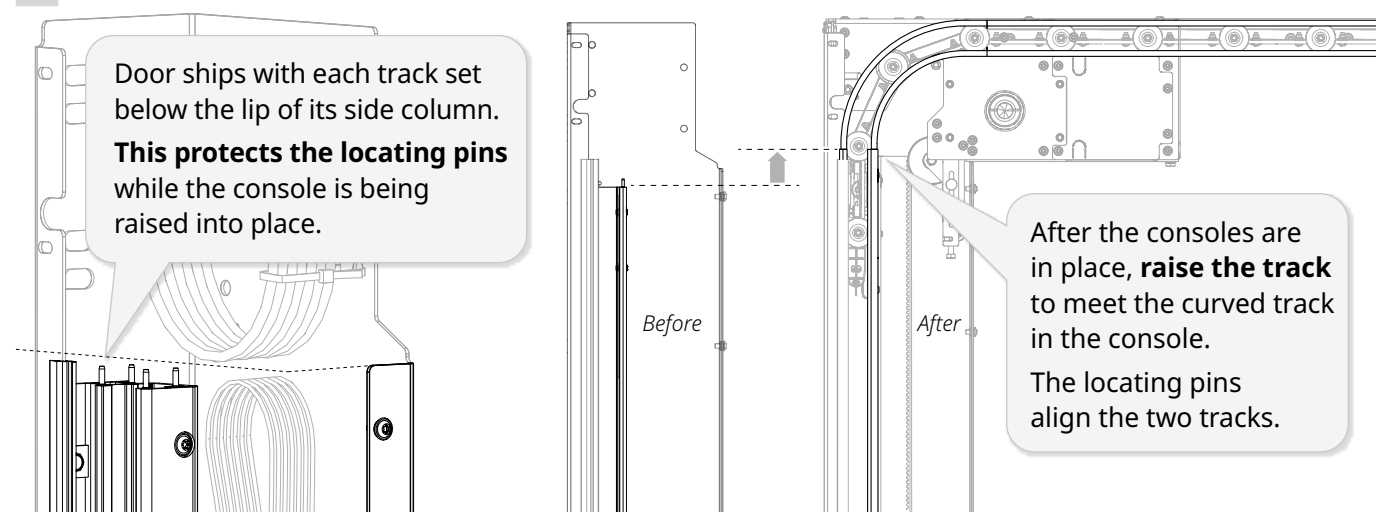


How to prep the side columns

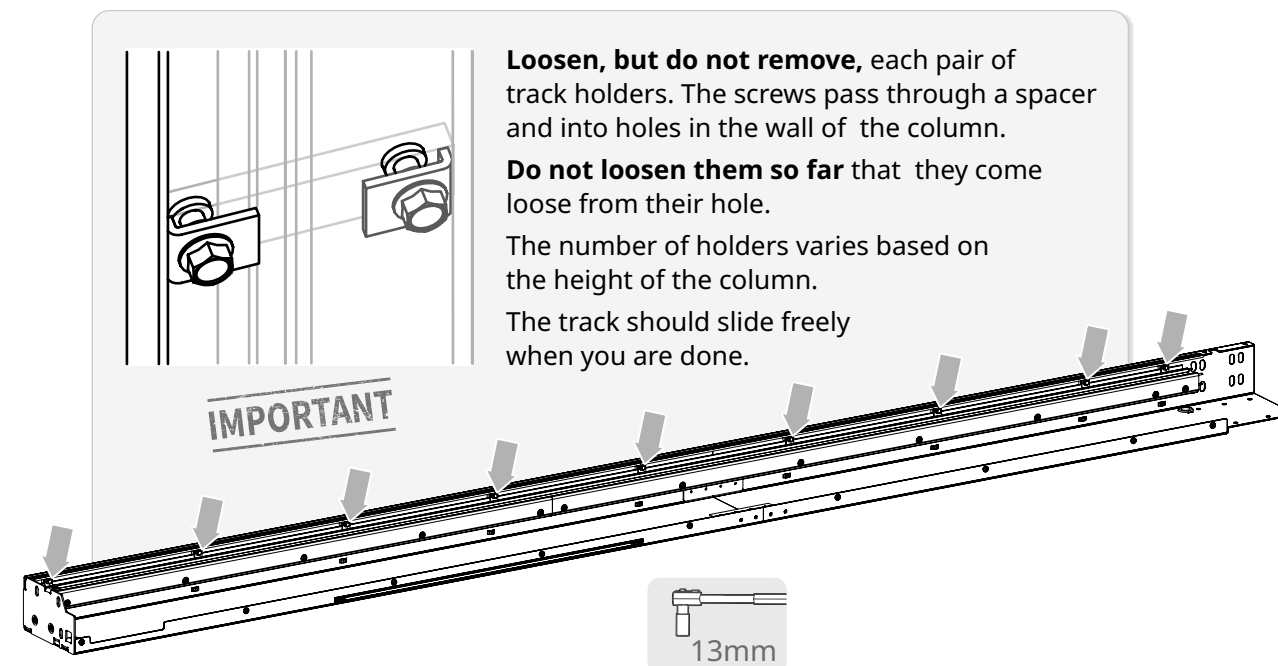
- 1 Remove** the covers on both side columns.
Screws for side column covers run in a vertical line. There is also one screw at the base of the column.



- 2 Make sure** the vertical guide tracks for the door panels are in the fully lowered position.



- 3 Loosen** the holders on the vertical guide track.
If necessary, lower the track.
Do this for both columns.

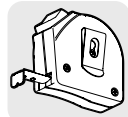


How to center the door in the door opening

IMPORTANT

Rytec doors are engineered to be centered in the door opening, so follow these steps even if the width of the opening and the production width match exactly.

1



Measuring tape



Carpenter's square

Object list				Material number	
Duplicate				716	
Material description		Order number		Order quantity	
SPIRAL STN-S		20076896		1 EA	
Production schedule		Order type		Start	
T6		ZP02		11/04/2019	
Tier 6		RYTEC MTO Order		Finish	
				11/06/2019	
Status		Plant		Reservation number	
REL MSPT PRT PRC SETC		2000		0002596972	
		Rytec Corporation -		Creation Date	
				10/22/2019	
Serial number					
D0099760-010					
Configuration					
DOOR MODEL NAME Spiral Low Headroom EV "S"					
Door Width (Inches) 216-142 216-3/16 ①					
Door Height (Inches) 144-100 144-100					
Production Width in mm 5,490					
Production Height in mm 2,590					
Door head size A					
Line Voltage 230V					
Motor mount side Left Hand Motor					
Motor Duty Standard Duty Motor					
Horsepower 2.0					
Number of solid slats 0					
Number of vent slats 0					
Brake Release Location Release lever on side column					
Hood style No spiral hood type					
Number of spacers 1					
Number of rollers 1					

Width to center = 1/2 ①

Width to center = $1/2$ ①

1: Measure the width of the door opening (w) and find the halfway point ($1/2 w$). Mark the centerline there.

2: Use the width to center from the object list ($1/2$ ①). Starting at the centerline, measure and mark the reference line for the first column.

Plumb, level, square: how to position the door correctly as you install the side columns

IMPORTANT

Call Rytec technical support at 800-628-1909 immediately and stop the installation if you are not able to correctly position the door.

Before you begin: things to know before you anchor the side columns

IMPORTANT

Do not anchor the top anchor hole on the inside of the side column (above the guide track) until after the consoles have been installed and leveled. This anchor passes through both the console and the side column.

There are four sets of anchor holes (①,②,③,④) at the top of each side column. Use at least one anchor in each set of anchor holes. You must use at least four top anchors. Position anchors at the horizontal center of the anchor holes.

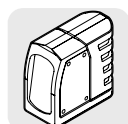
There are three anchor holes (①,②,③) in the baseplate of each side column. You must use at least two anchors in the baseplate. For LPS and SPS doors:

Step 1: Plumb and level the site, then install and plumb the side columns

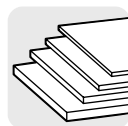
- 1 Plumb** the door opening.
If the wall is not plumb, or there is bowing or an obstruction in the wall, **shim** the columns.

IMPORTANT

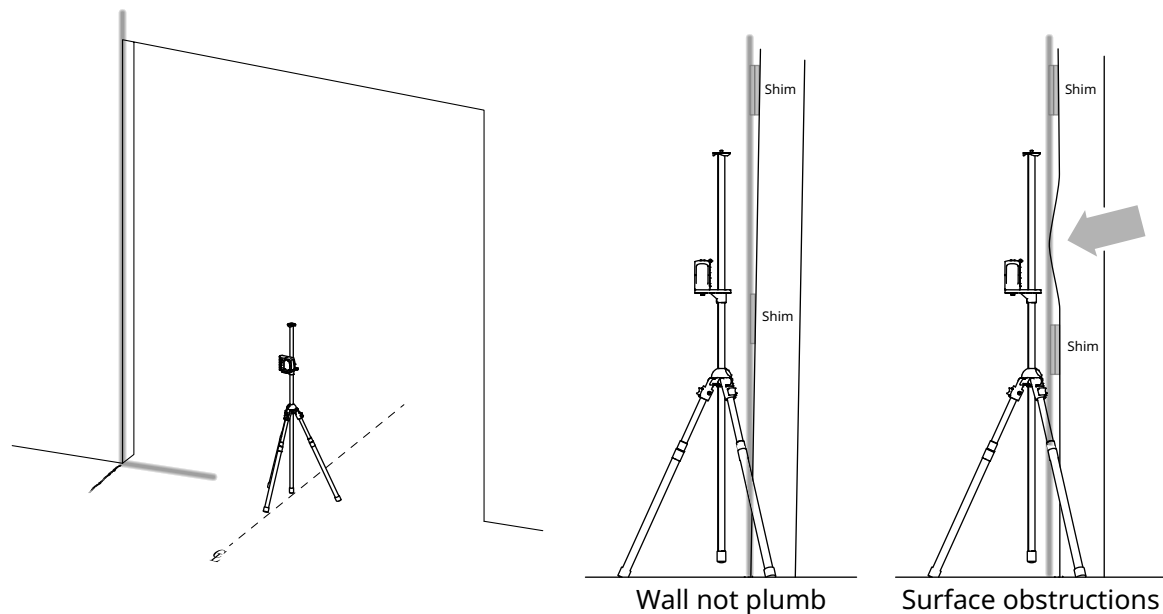
To prevent column from bowing, shim as needed **at each anchor point**.



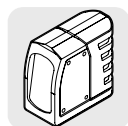
Laser level



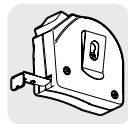
Shims



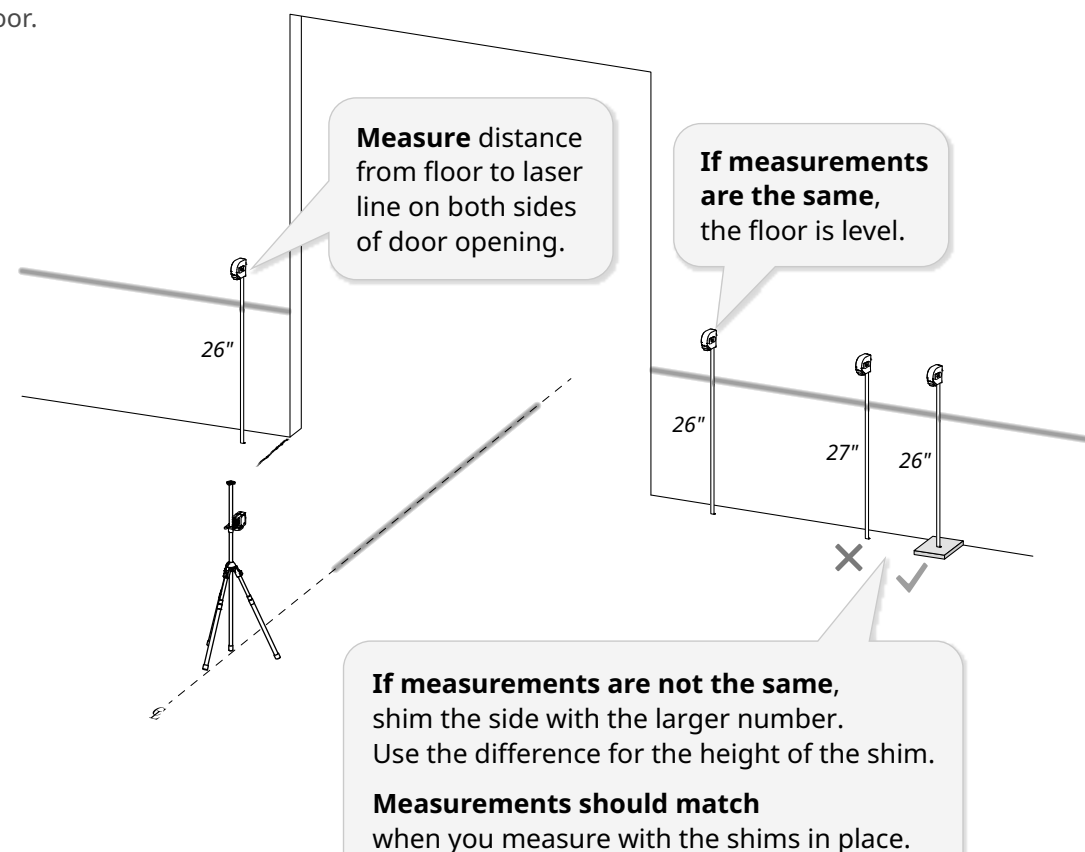
- 2 Level** the floor.



Laser level



Measuring tape



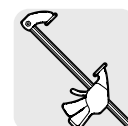
3 IMPORTANT

If the floor is level, install the drive side column first.

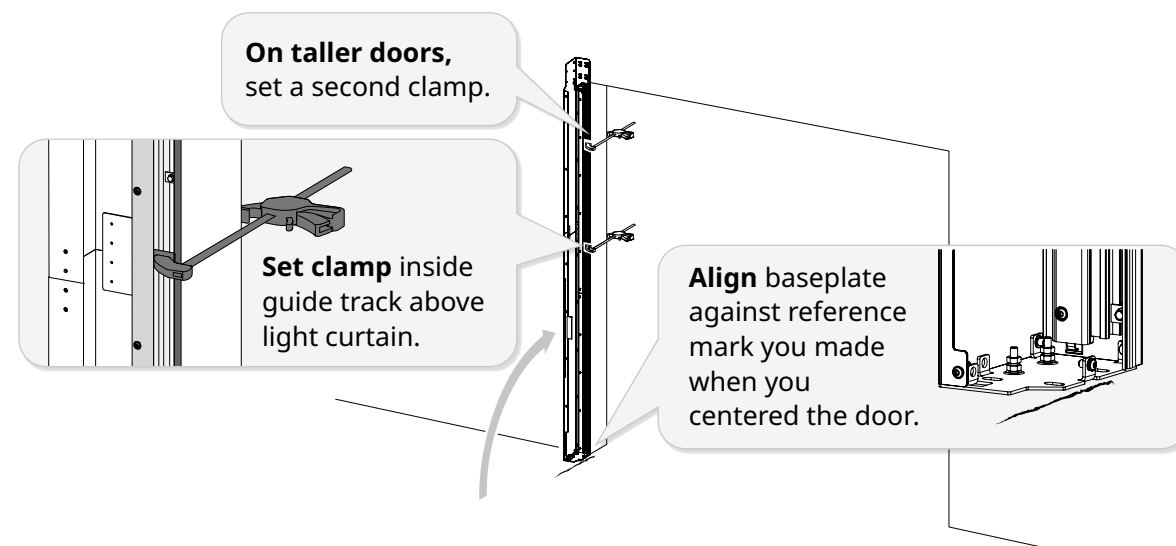
If the floor is not level, install the side column that is not shimmed first.

4

Clamp the first side column into place.

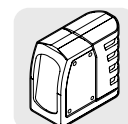


Bar clamp

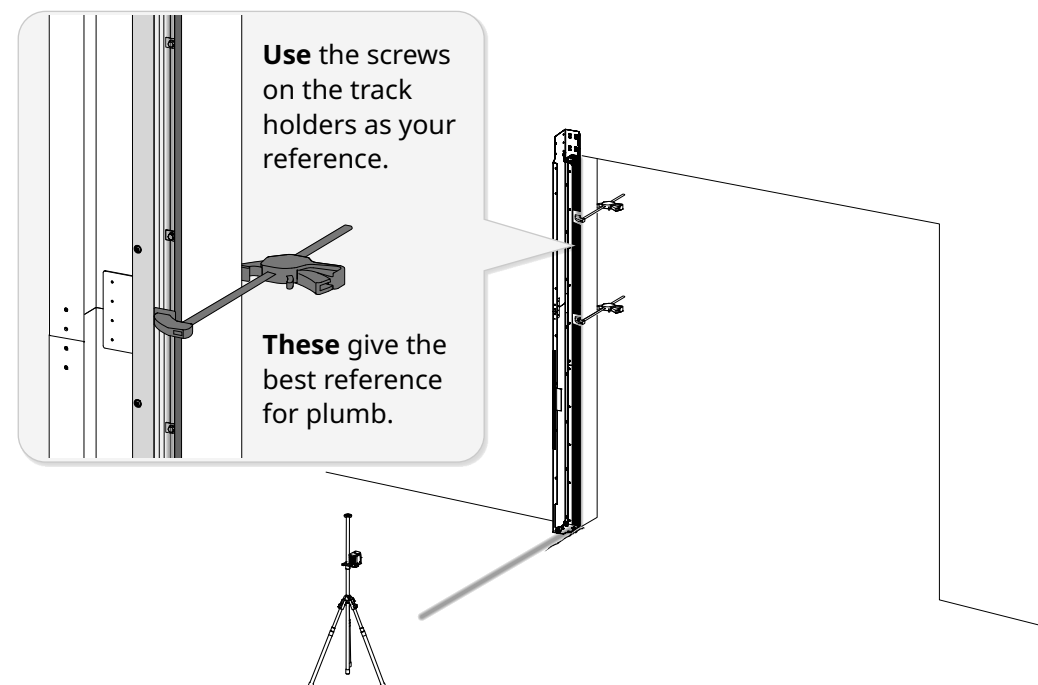


5

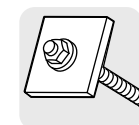
Plumb the side column.



Laser level



6



Anchoring hardware

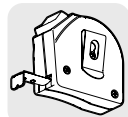
Anchor the first side column to the wall at the **top of the column** and **baseplate**.
Set anchors tight. **Remove** clamp(s).

IMPORTANT

Make sure you have read *Before you begin* on the previous page before you start.

DO NOT ANCHOR the top anchor hole nearest to the door opening until the consoles have been installed and leveled.

7 Measure and mark the reference mark for the second side column.

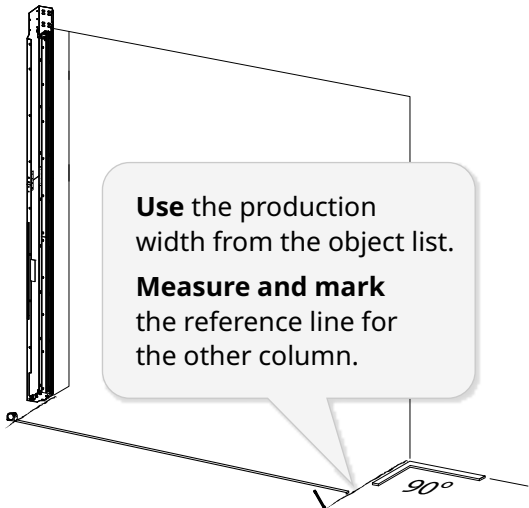


Measuring tape



Carpenter's square

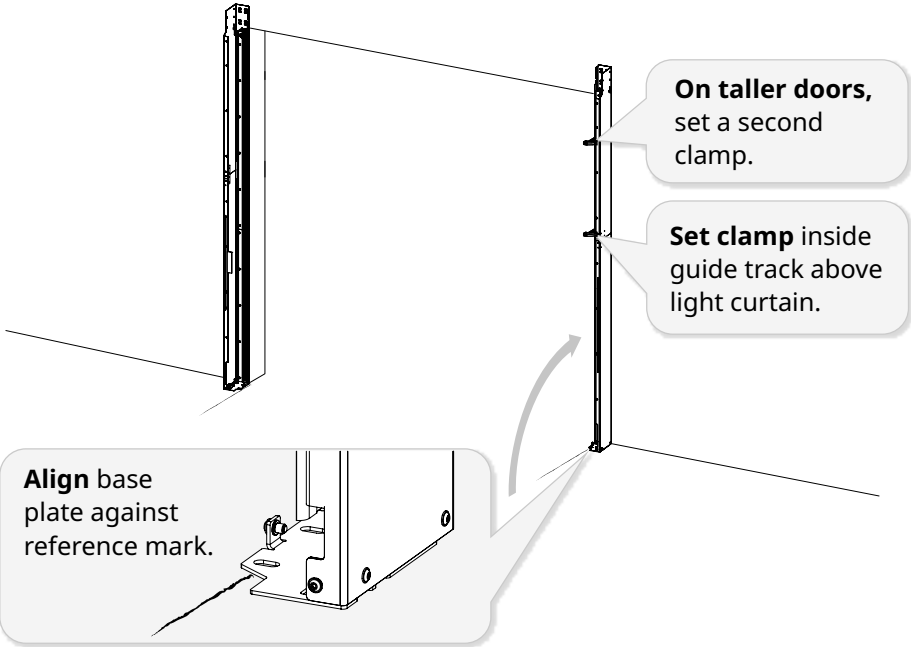
Object list		Material number
Duplicate		716
Material description	SPIRAL STN-S	Order number 20076896
Order type	1 EA	Order quantity
WSP controller	500 BS ZMAT	Production scheduler T6 Tier 6
Order type	ZP02 RYTEC MTO Order	Start 11/04/2019
Finish	11/06/2019	Creation Date 10/22/2019
Status	REL MSPT PRT PRC SETC	Plant 2000
Reservation number	0002596972	Rytec Corporation
Serial number D0099760-010		
Configuration		
3000 MODEL NAME Spiral Low Headroom EV "S"		
Door Width (Inches) 216-142 216-3/16 ①		
Door Height (Inches) 104-863 102		
Production Width in mm 5,490		
Production Height in mm 2,590		
Door head size A		
Line Voltage 230V		
Motor mount side Left Hand Motor		
Motor Duty Standard Duty Motor		
Horsepower 2.0		
Number of solid slats 0		
Number of vent slats 0		
Brake Release Location Release lever on side column		
Hood style No spiral hood type		
Hood style No spiral hood type		
Hood style No spiral hood type		



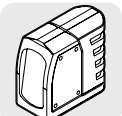
8 Clamp the non-drive side column into place.



Bar clamp



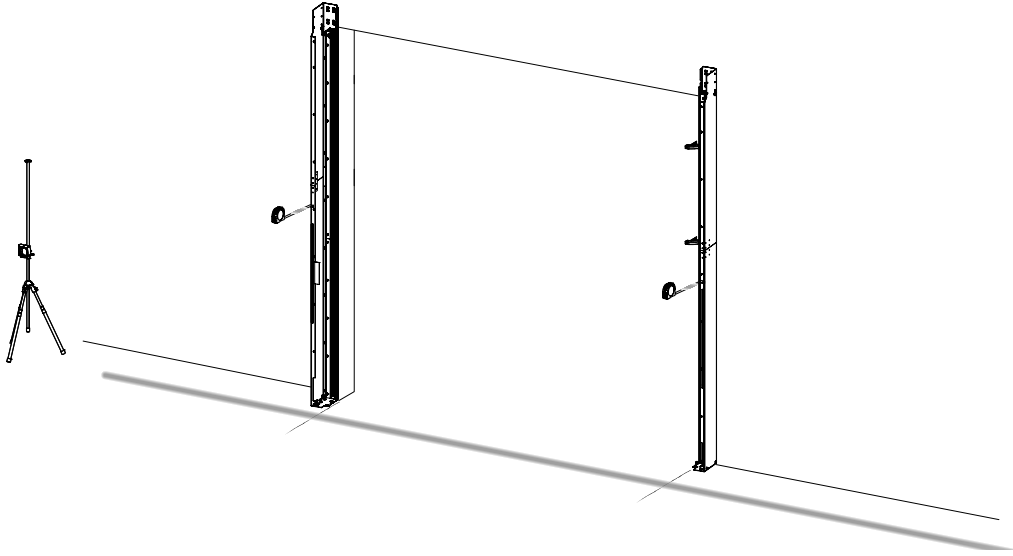
9 Set a laser line parallel to the wall 1" (one inch) in front of columns. Make sure the line is parallel to the wall.



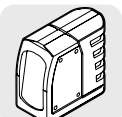
Laser level



Measuring tape



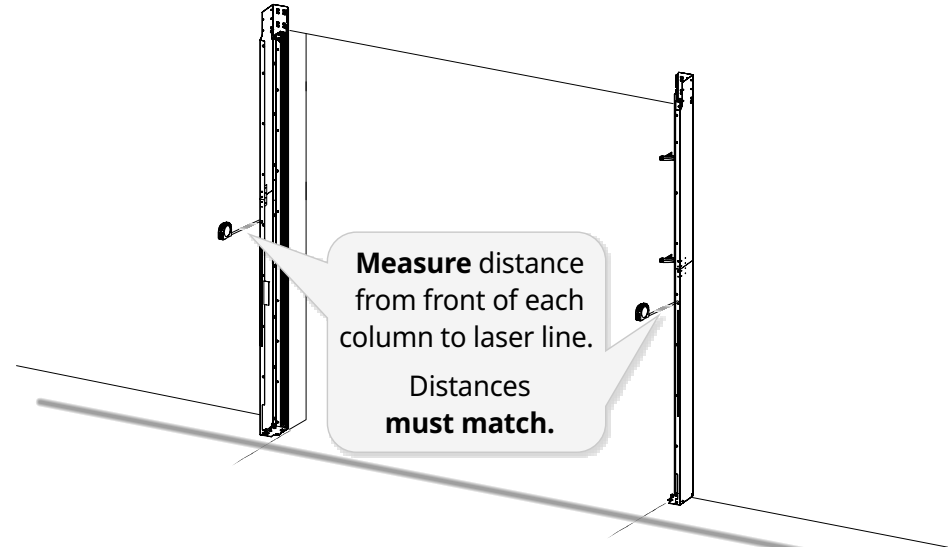
10 Plumb the side columns to each other.



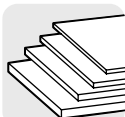
Laser level



Measuring tape



11

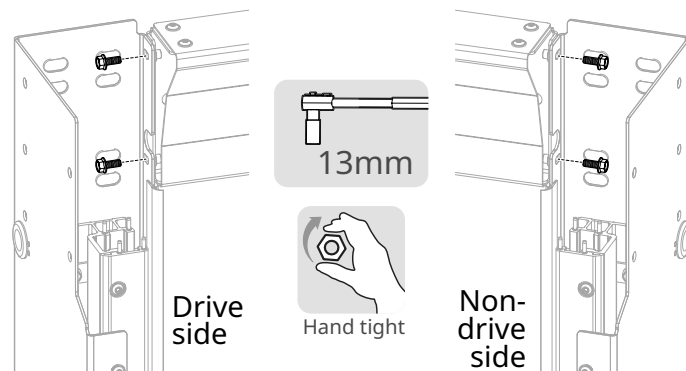


Shims

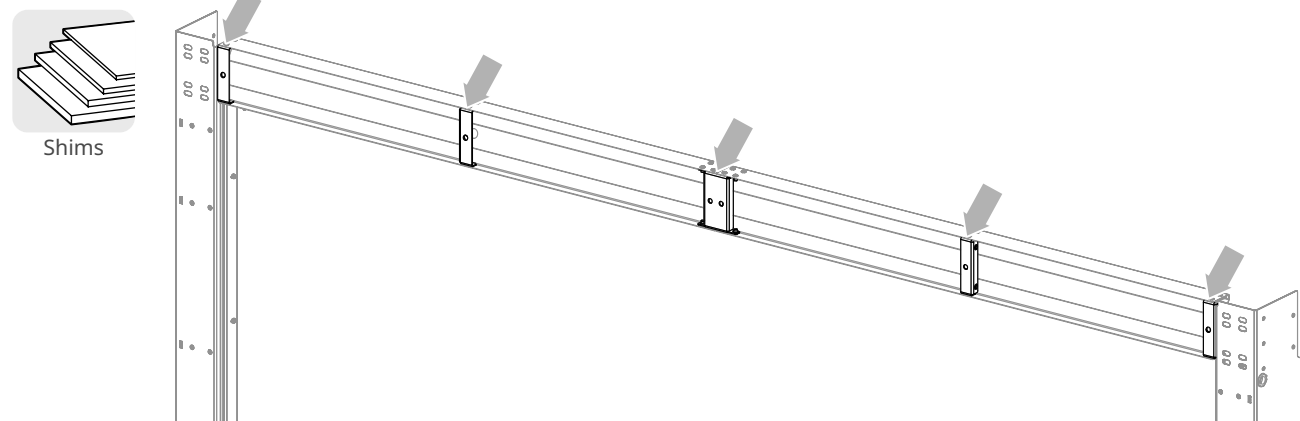
If necessary, shim the side columns so they are plumb to each other.

Step 2: Install the rear seal (rear spreader)

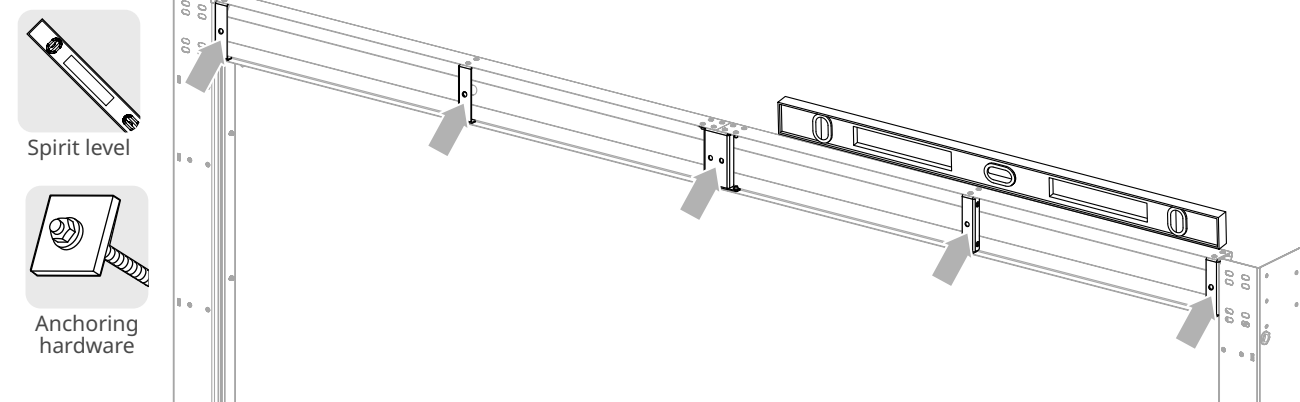
1 Install bolts on both sides of the seal and **hand tighten**.



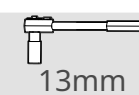
2 Make sure all of the anchor points of the seal are making direct contact with the wall.
▪ If necessary, **shim the seal** at all anchor points that are not flush.



3 Make sure the rear seal is level, then **anchor** the rear seal to the wall at all anchor points.

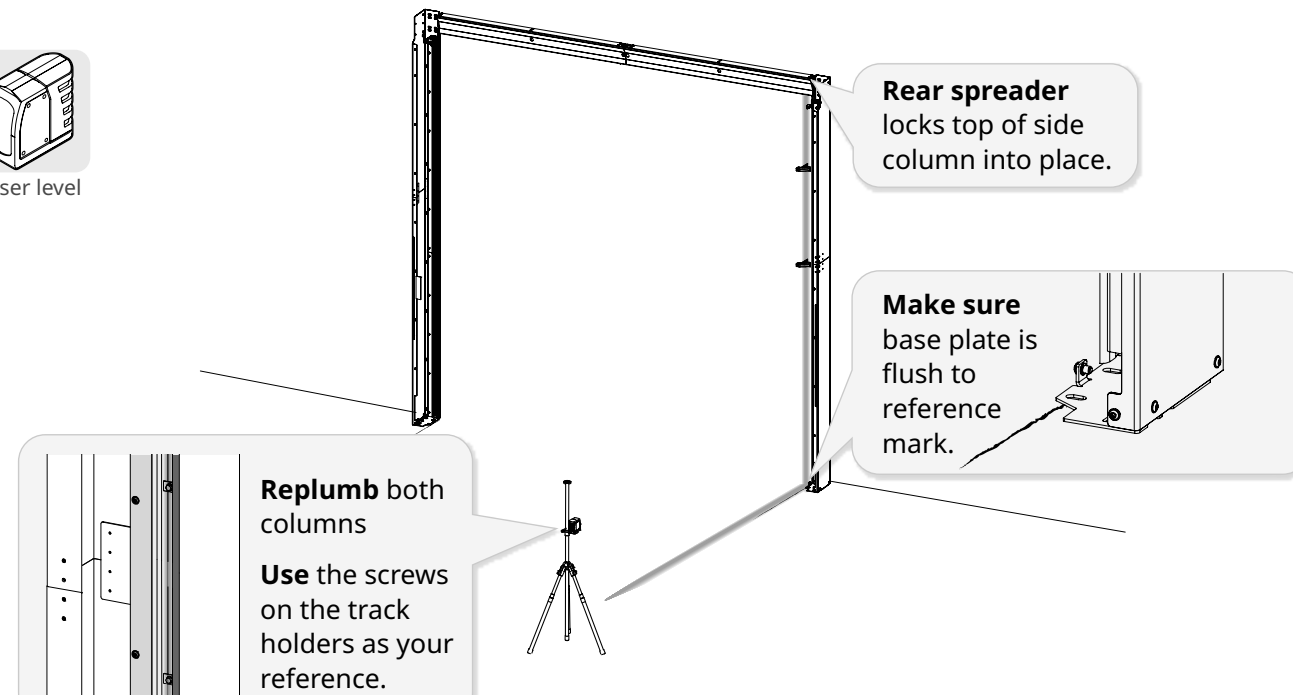


4 Tighten the bolts on both sides of the seal.



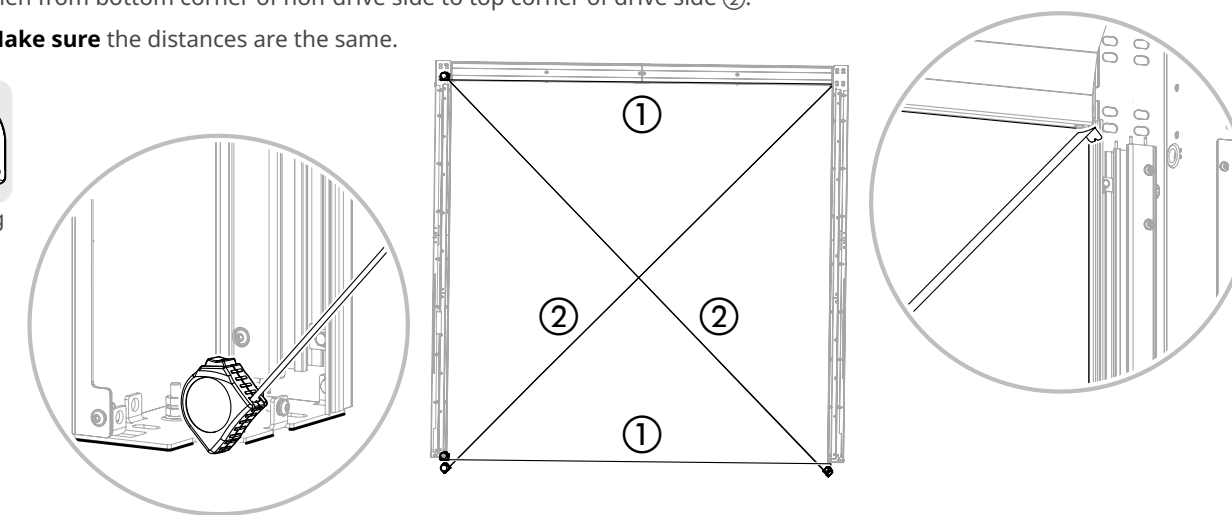
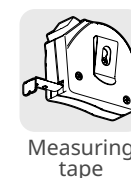
Step 3: Replumb and square the door and finish anchoring the side columns

1 Make sure the second side column is properly lined up, then **replumb** both side columns from the front.



2 Square the door:

- **Measure** distance between side columns at top and bottom of columns ①.
- **Make sure** the distances are the same.
- **Measure** distance from bottom corner of drive side to top corner of non-drive side, then from bottom corner of non-drive side to top corner of drive side ②.
- **Make sure** the distances are the same.



3 Anchor the second side column to the wall at the **top of the column** and **baseplate**. Set anchors tight. Remove clamp(s).




IMPORTANT

Make sure you have read *Before you begin* on the page 7.


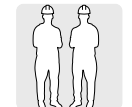
DO NOT ANCHOR the top anchor hole nearest to the door opening until the consoles have been installed and leveled.





How to install the consoles



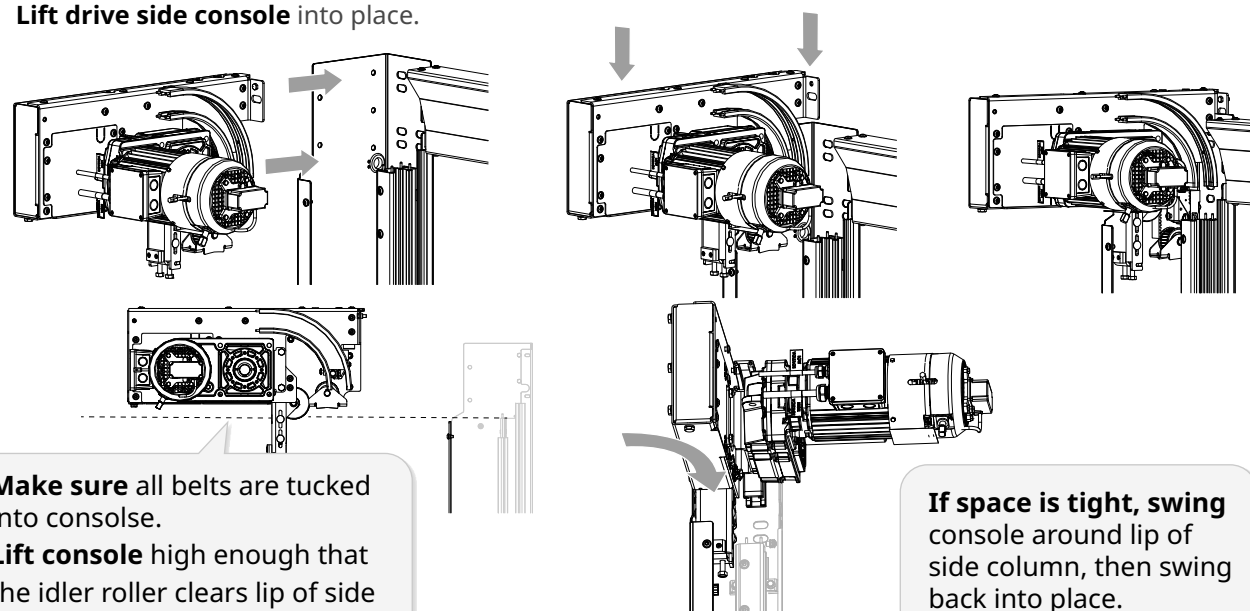
WARNING

The drive side console weighs up to 200 pounds.

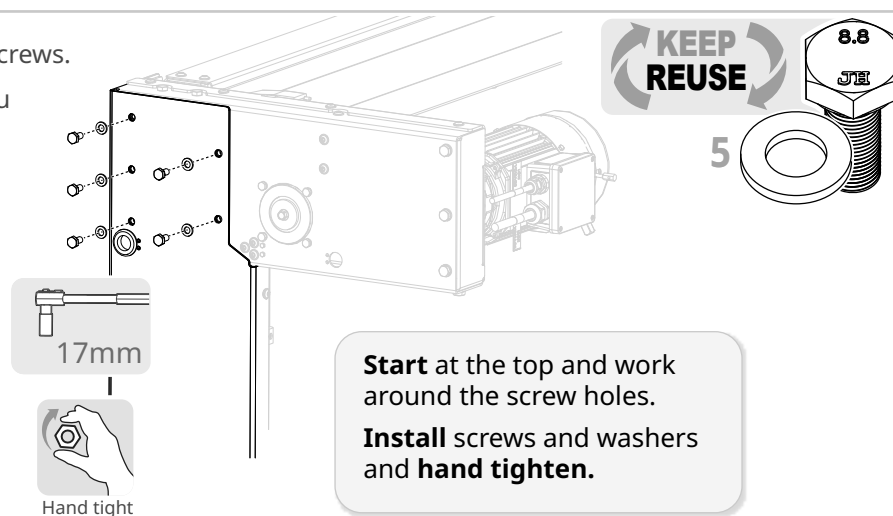
-  **Make sure** you use a forklift or mechanical lift that meets all requirements listed on page 1 of this manual.
-  **Make sure** the console is secured to the lifting equipment.
- Two-person lift** when console is placed on the side column.

1 Lift drive side console into place.



2 Reinstall the side column screws. Hand tighten only until you have leveled the console.

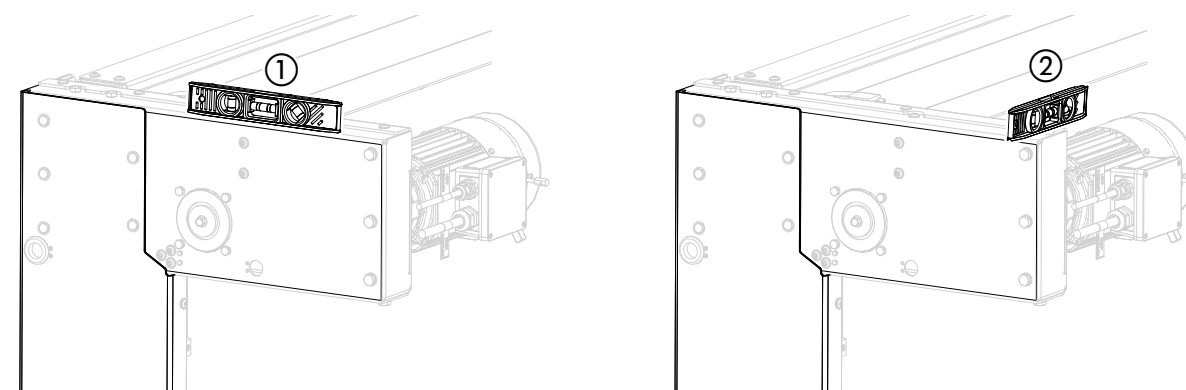


3 Level the console laterally ①.

- If necessary, **loosen** the side column screws, **manually adjust** the position of the console, and **tighten** the screws.

Level the console horizontally ②.

- If necessary, **loosen** the side column screws, **manually adjust** the position of the console, and **tighten** the screws.

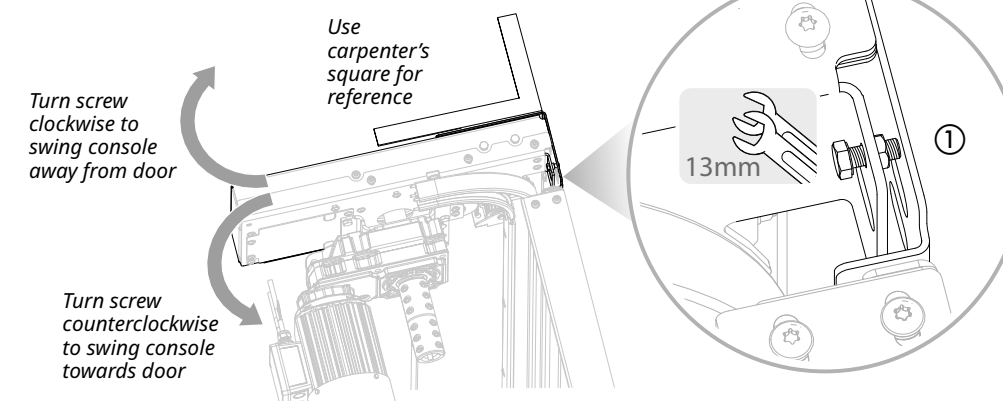
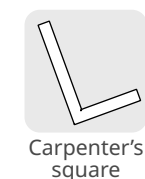


4 Tighten the side column bolts.



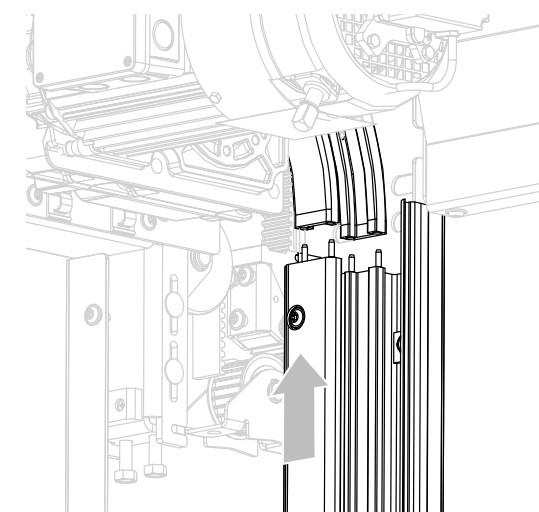
5 Square up the console so it is perpendicular to the wall.

- Use a carpenter's square and **turn** the rear hex adjustment screw ①.

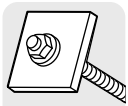


6 To verify that that console is correctly aligned, loosen the screw on the vertical drive track and raise the track into place.

- The track pins should slide easily into their holes.



7



Anchoring hardware

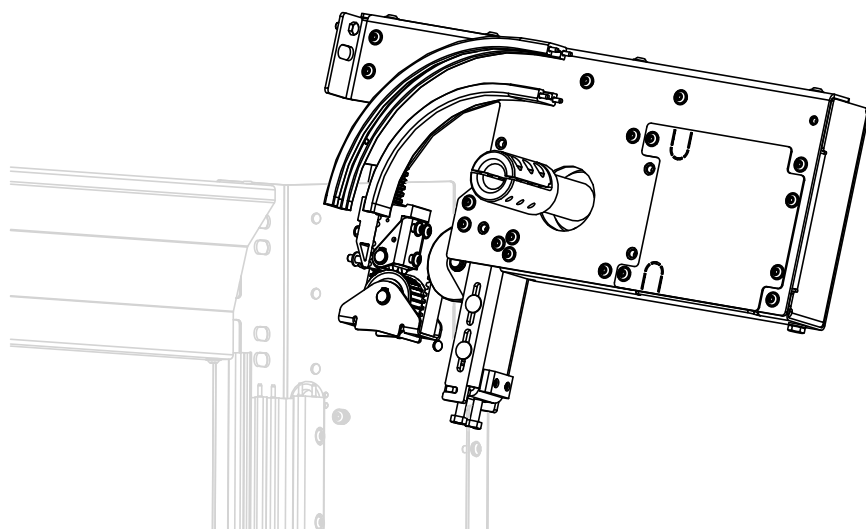
Anchor the side column to the wall in the hole below the adjustment screw.

IMPORTANT

DO NOT torque the anchoring hardware so much that it bends the rear tab of the console.

8

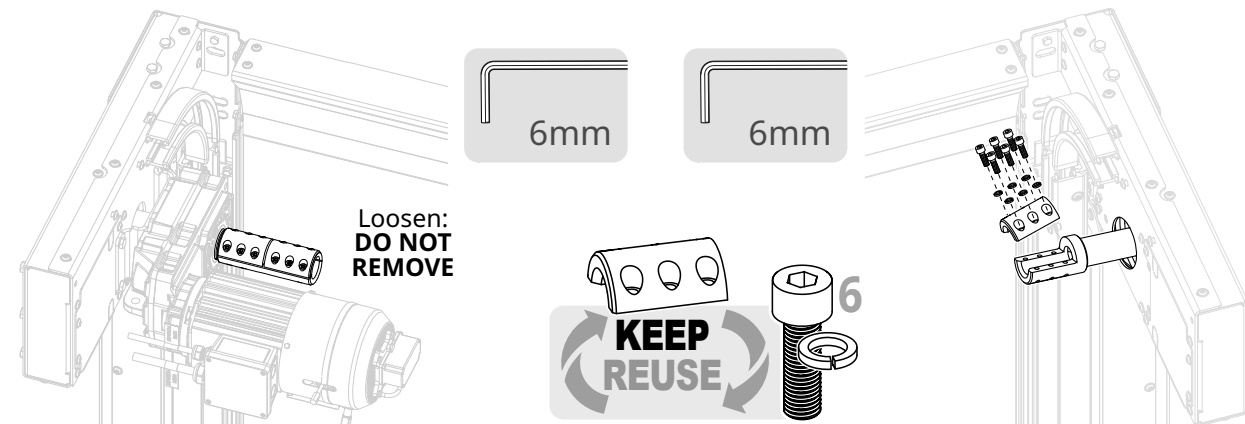
Repeat steps 1-7 for the non-drive side console.



How to install the drive tube

1

Remove the clamping jaw from the non-drive side shaft. **Loosen** the screws on the drive side shaft.

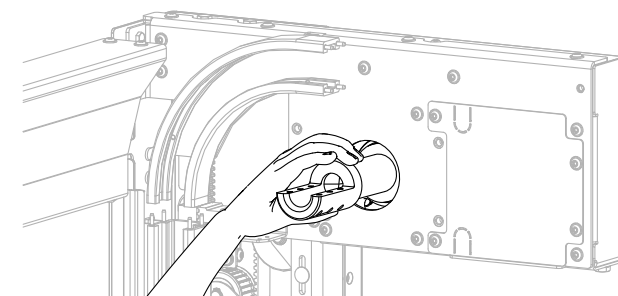


2

Make sure the non-drive side drive shaft is turned to face upward.

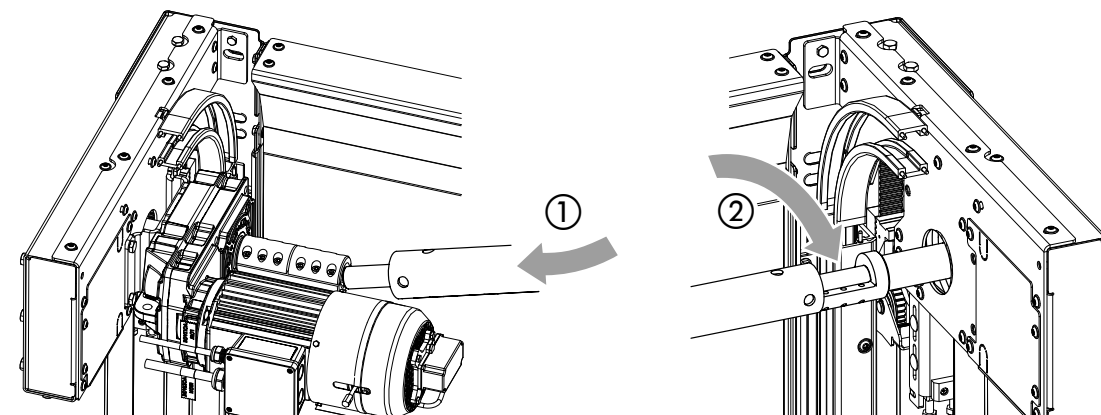
- The drive side shaft is held in place by the motor and may be at an angle. **DO NOT try to turn it.**

Push it in until it is seated tightly against the pulley wheel.



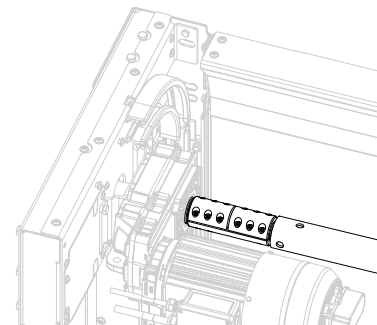
3

Lift the drive tube. **Insert** the drive side of the tube ① into the drive side drive shaft. **Place** the non-drive side of the tube ② onto the non-drive side drive shaft.



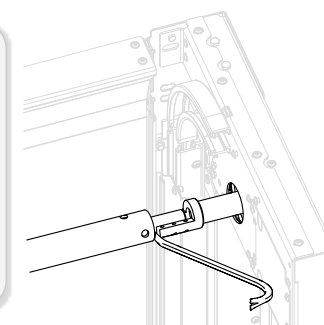
4

Make sure the drive tube is centered between the two shafts. There should be a **small offset** on both sides.



INSIDER'S TIP

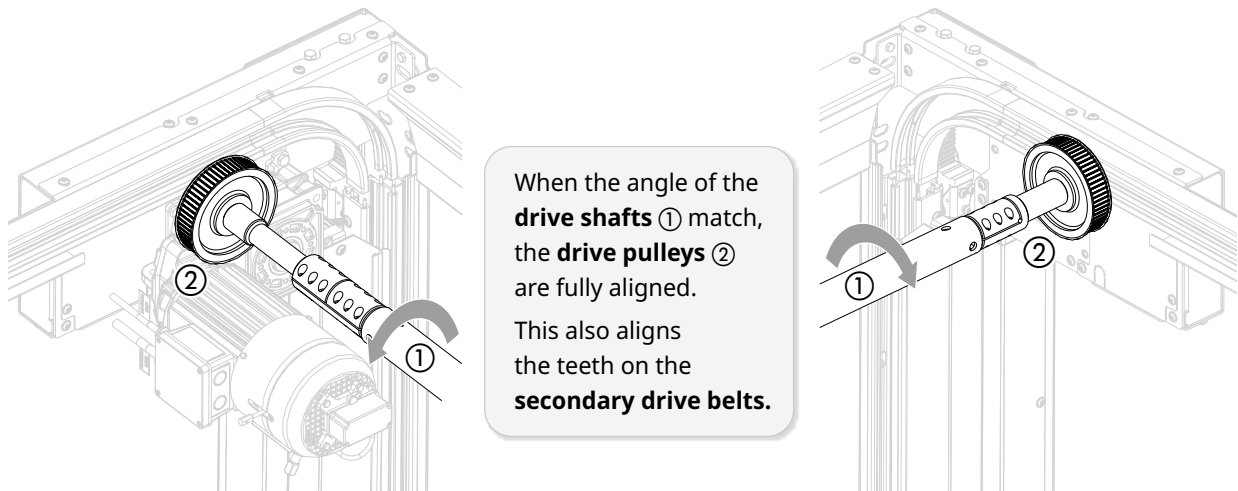
Before centering the drive tube, use a crowbar to **tighten** the non-drive side shaft against the pulley.



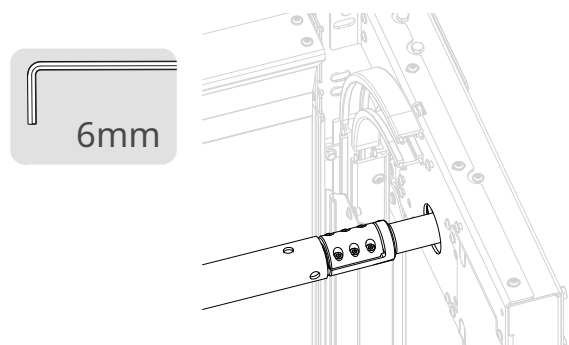
- 5** **Tighten** the screws on the drive side shaft.
Reinstall the non-drive side clamping jaw. Set the screws **loose enough to turn the shaft freely**.



- 6** **Make sure** the angles of the drive side and non-drive side shafts mirror each other.
 ■ This aligns the two secondary drive belts as closely as possible and makes it easier to level the door panel.

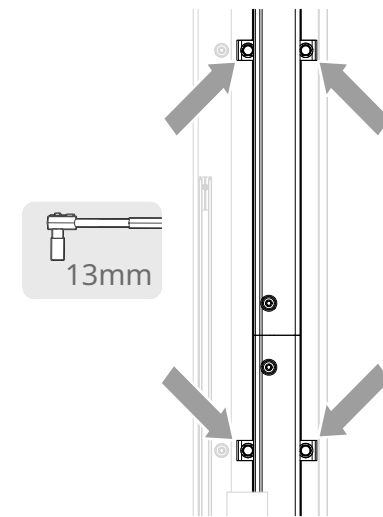


- 7** **Tighten** the screws in the drive shaft to lock the shaft in place.
 ■ Angle of shaft may not match illustration, but should **mirror angle** of drive-side shaft.

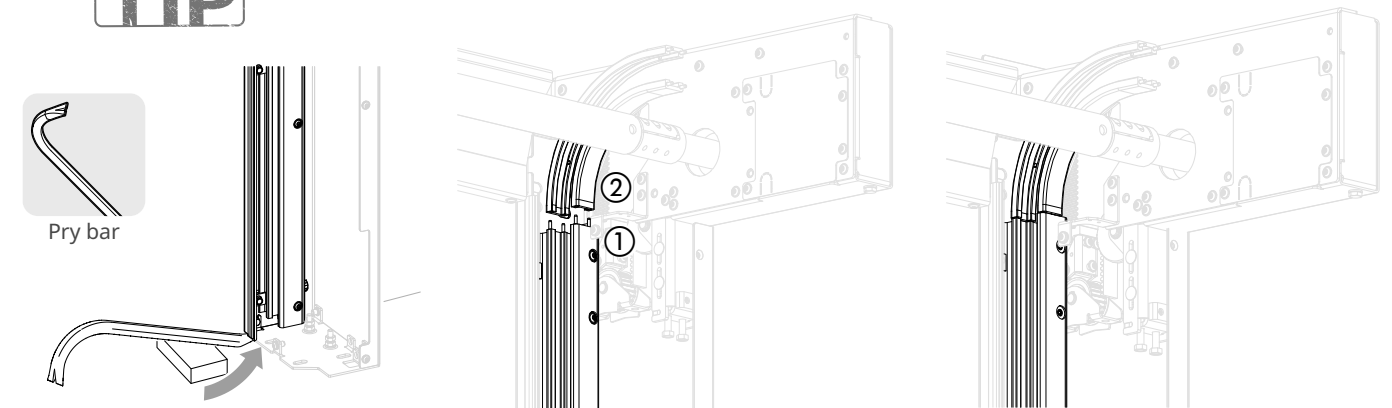


How to raise the vertical guide tracks into place

- 1** **Make sure** that all of the vertical guide track holders are loose enough to allow the track to move freely.
DO NOT remove any of the holders.



- 2** **Make sure** the pins at the top of the vertical guide track ① align with the holes in the radial track ② of the console.
INSIDER'S TIP Use a pry bar to lift and hold the vertical guide track in place.

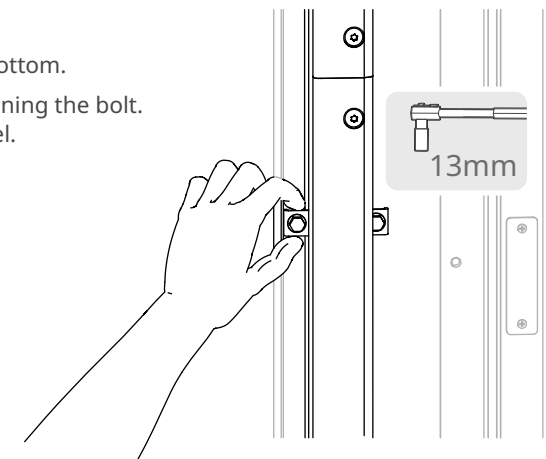


- 3** **Tighten** the bolts on the track holders.
 ■ Start at the **middle of the track** and work toward the top and bottom.
 ■ **Make sure** the holder is at a 90° angle to the track before tightening the bolt. **You will need to hold it in place** while tightening to keep it level.
 ■ **Make two full passes** from top to bottom: tighten bolts to snug on the first pass, then fully tighten on the second pass.

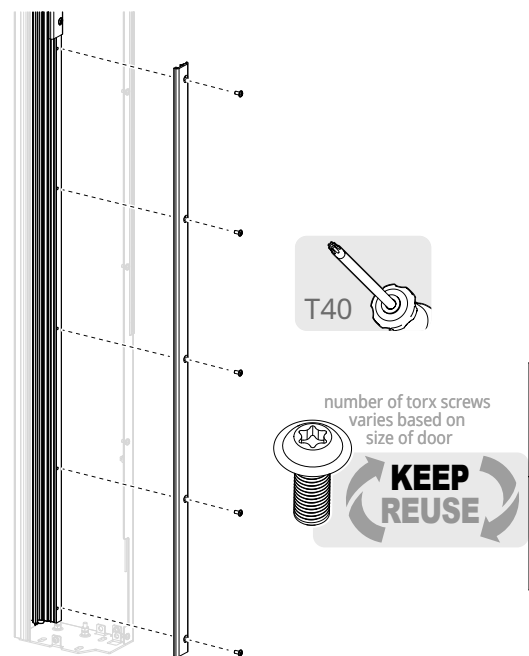


CAUTION

Make sure your fingers are clear of the bolt when tightening. Power tools are not recommended.

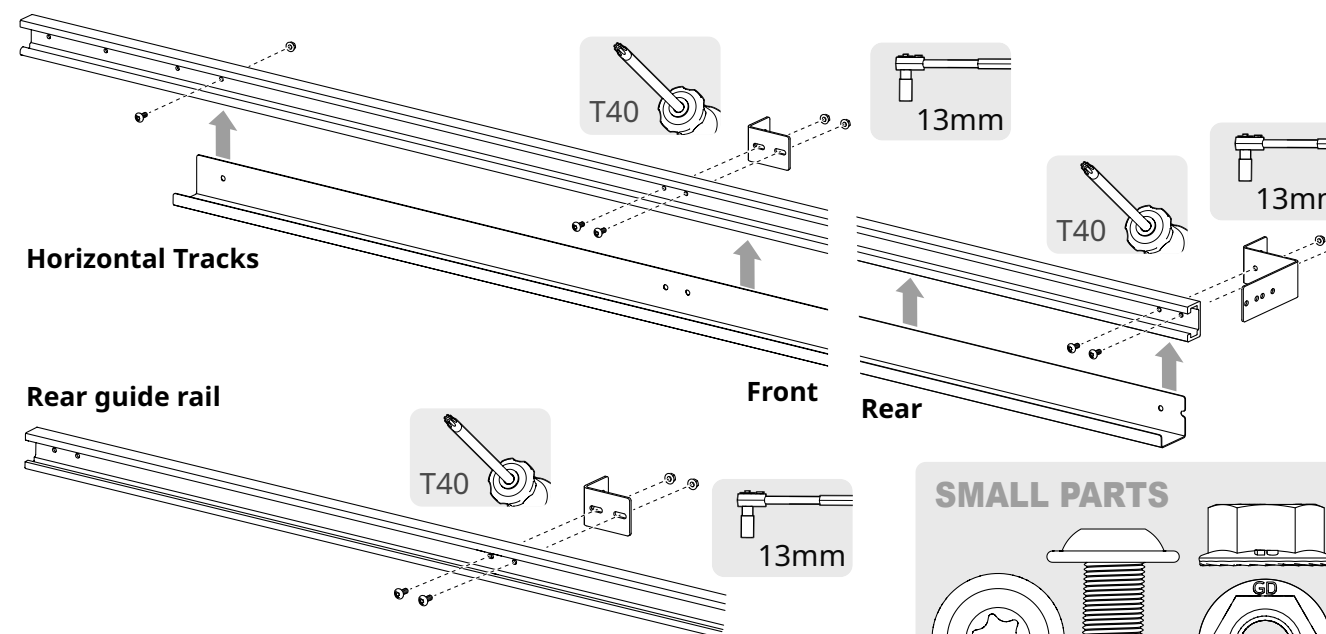
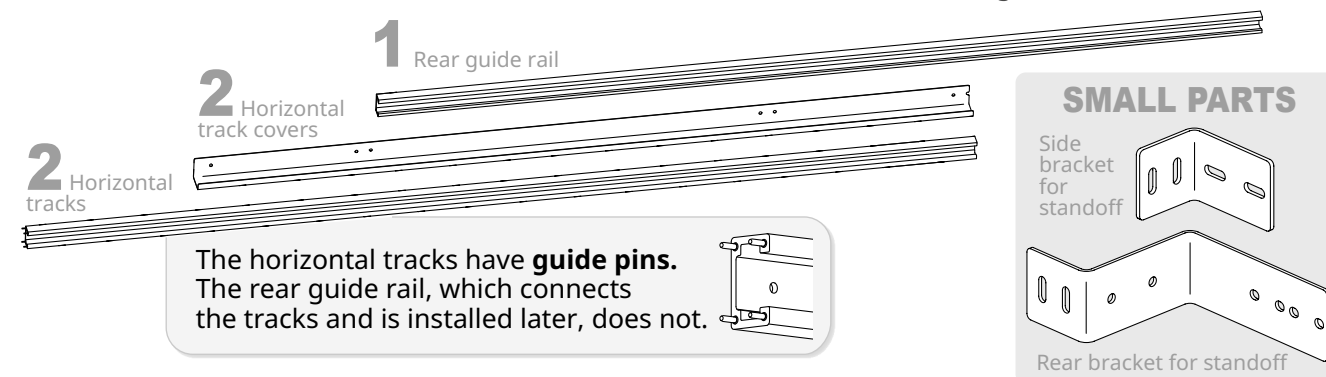


- 4** **Remove** the bottom section of the vertical guide track cover.
Do this in both side columns.



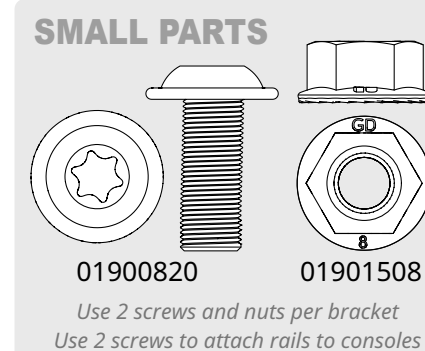
How to install the horizontal tracks

- 1** **Locate** the two horizontal tracks and track covers, and the rear guide rail, in the crate.
Locate the standoff brackets (side and rear), screws and nuts in the small parts box.
Install the covers and brackets onto the tracks. **Install** the bracket onto the guide rail.

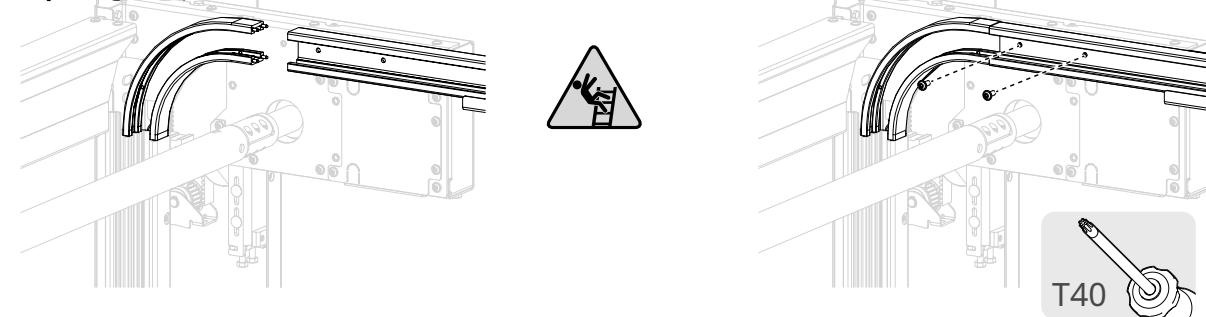


IMPORTANT

ALL HARDWARE must be installed fully tight so that screw heads are clear of the rollers when the door is operating.



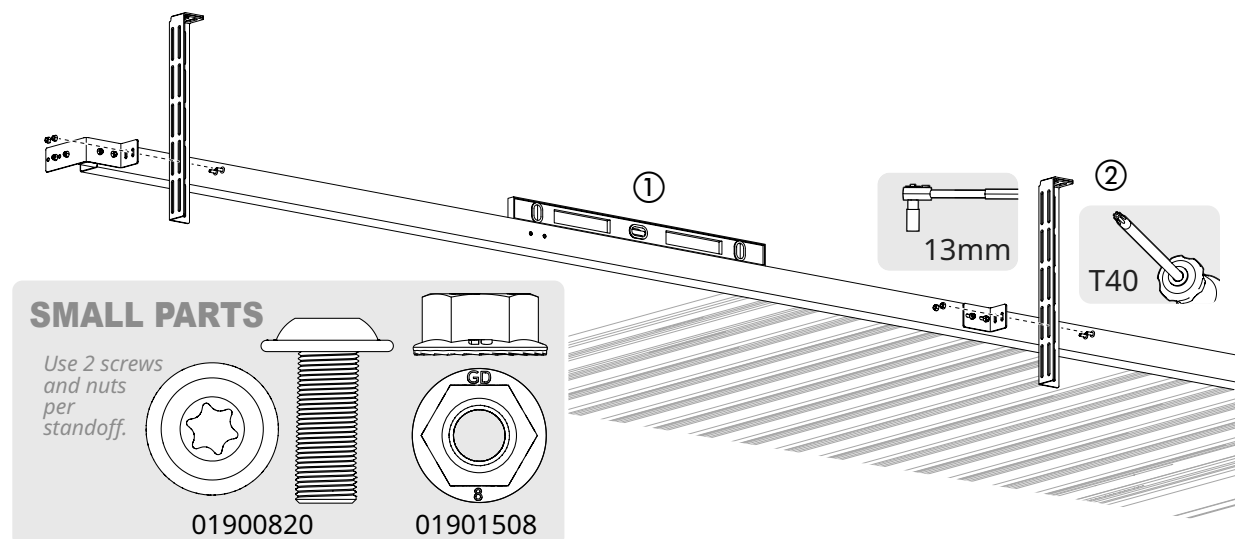
- 2** **Line up** the guide pins in the horizontal track with the holes in the radial track of the console and **install** the track.



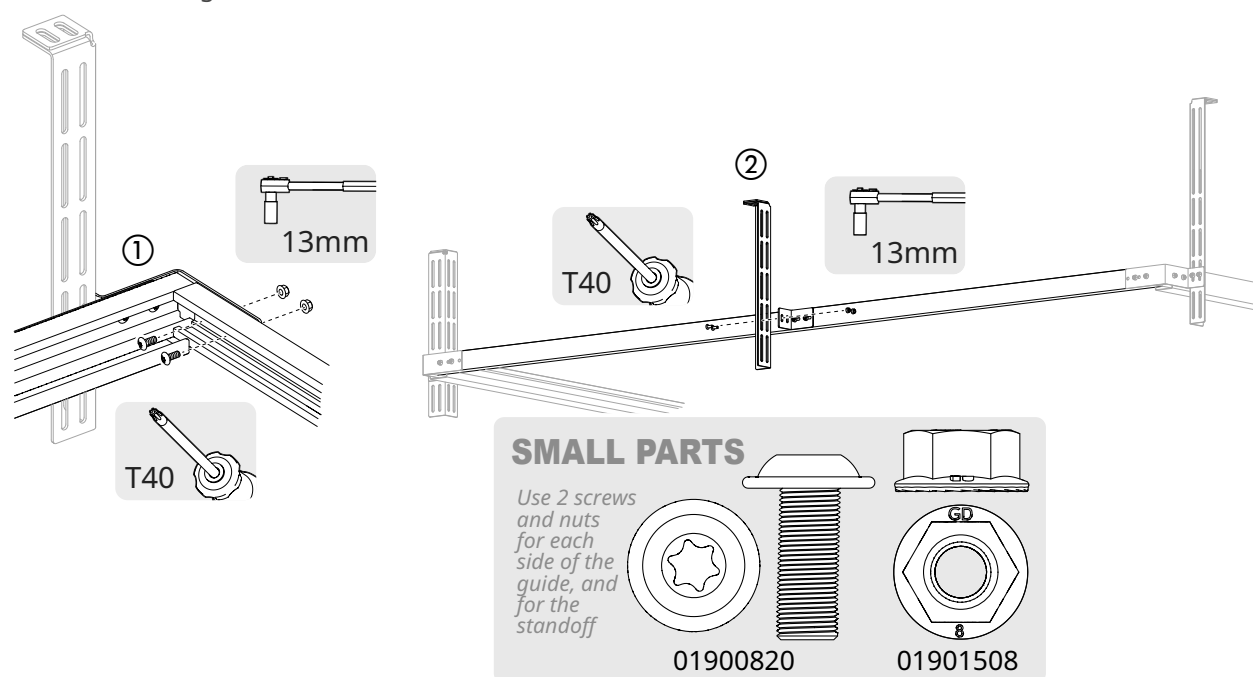
IMPORTANT

Do not remove the straps and vice grips holding the door in place until after the secondary drive belt has been installed and tensioned.

3 **Level** the horizontal tracks ①. Then **locate** and **install** the standoffs so they are flush with their anchor points ②.

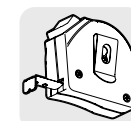


4 **Install** the rear guide rail and the rear standoff.

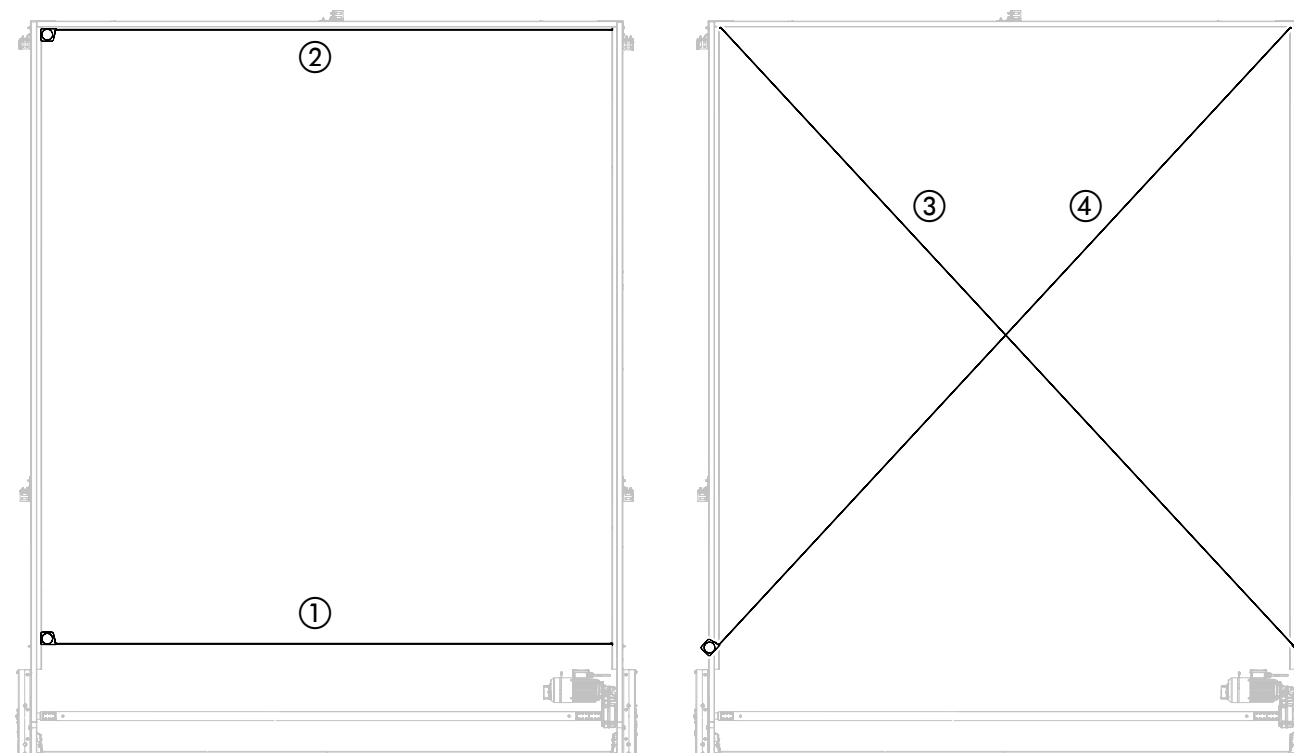


5 **Square** the horizontal tracks:

1. **Measure** between the tracks at the start ① and end ② points.
 - If the measurements do not match, adjust the rear guide until they do.
2. **Measure** diagonally across the tracks (③, ④).
 - If the measurements do not match, reposition the tracks until they do.
3. **IMPORTANT** When the tracks are square, **mark the position** of all of the standoffs and the anchoring holes in the ceiling.



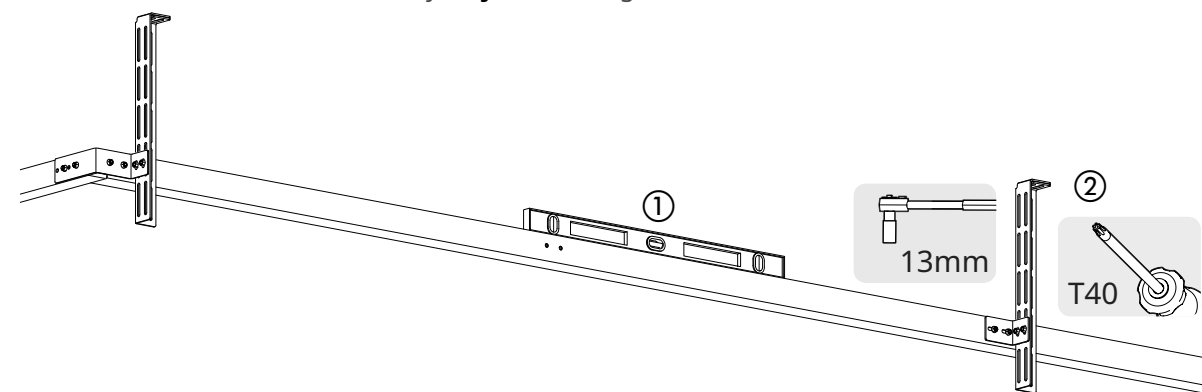
Measuring tape



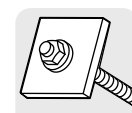
6 **Level** the horizontal tracks ①. If necessary, **adjust** the height of the standoffs ②.



Spirit level



7



Anchoring hardware

Anchor the standoffs to the ceiling.

How to install the door panel

- 1 Use a forklift to remove the door panel, on its pallet, from the crate.

IMPORTANT

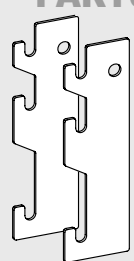
Pallet is nailed to crate. Use a crowbar to loosen the nails before lifting.

IMPORTANT

Make sure the door panel is centered before lifting.

- ① Place foam or cardboard against the backstop to protect the door finish.
- ② DO NOT clip the ties around the rollers until you are raising the panel. The ties prevent the door panel from unraveling.
- ③ Make sure the door panels are wrapped AWAY FROM the door opening. If necessary, turn the pallet around.

TI SMALL PARTS n about the service plates

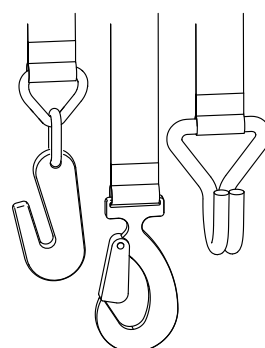


Service plates

Solid panels: rollers align with middle hook

L-size and S-size transparent panels: rollers align with upper hook

IMPORTANT
ALL HARDWARE and STRAPS should be rated at a minimum of 1000 lbs.

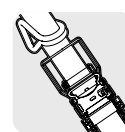


- Hole diameter ①: 5/8" (17mm)
- Distance to top ②: 1-5/8" (40mm)
- Minimum recommended height ③: 3" (75mm)

INSIDER'S TIP

Attach an anchor shackle or caribiner to the service plate to accommodate all hook sizes and configurations.

- 2 Hang a ratcheted strap from the drive tube next to each side column. **Attach** the service plates.



Ratcheted strap (2)



IMPORTANT

ALL STRAPS should be rated at a minimum of 1000 lbs.

- 3 Use the folklift to **position** the door panel under the vertical guide track. **Cut** the first ties to **free up** the first wrap of panels and **line them up** under the covered section of the track.



Cutting pliers

IMPORTANT

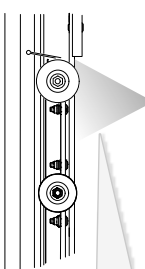
Constantly check the rollers throughout the lift to make sure they are not crushed, bent or pinched in the track.

Align the door panel with the vetical guide track.

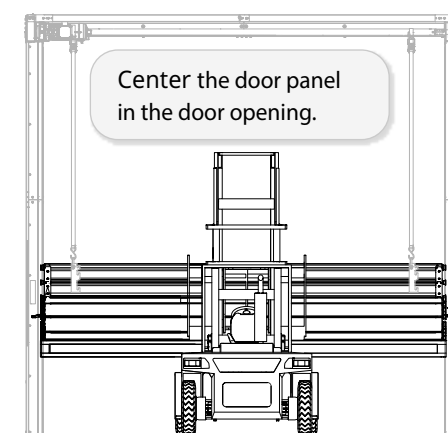
Center the door panel in the door opening.

There are three guide rollers in the door panel, at the top, bottom and vertical center.

The large roller aligns with the outside of the track. Make sure the guide rollers align on both sides of the door.



Align the front of the door panel with the track.
Cut the first set of ties to free the first wrap of panels.
Raise the fork so that the first panel is just below the covered section of the vetical guide track.

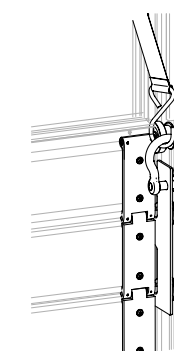
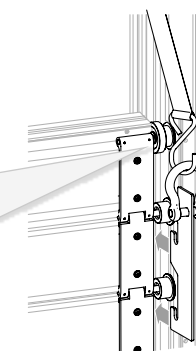


All rollers align with the groove in the track.

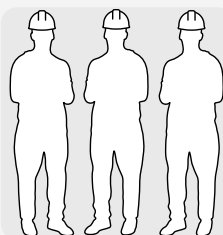
- 4 Hook the service plates under the first two non-guide rollers on both sides of the door.

IMPORTANT

DO NOT USE the guide rollers to lift the door panel.



Things to know about lifting the door panel



A three-person crew should be used to lift the door panel:

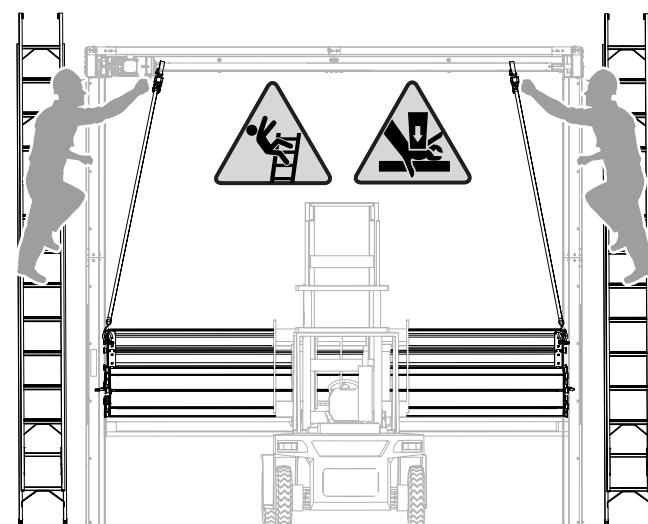
Two (2) to operate the ratcheted straps

One (1) to unroll the door panel and check the rollers.

For a two-person crew:

Lift the door panel together, then unroll the next section together, then continue the lift.

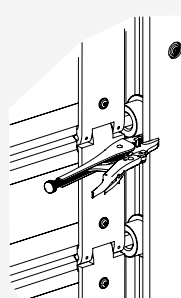
At the drive tube



Coordinate the lift between the two ratcheted straps so that the door panel remains level as it rises.

If you need to reset the straps, place vise grips under a non-guide roller in both tracks to temporarily hold the door panel in place.

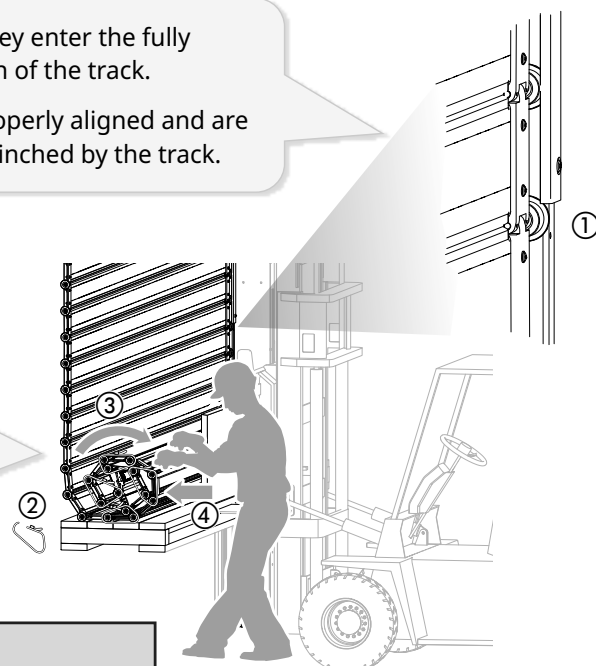
Place the service plates at a lower set of rollers and continue the lift.



On the ground

- ① Watch the rollers as they enter the fully enclosed upper section of the track.
Make sure they are properly aligned and are not crushed, bent or pinched by the track.

- ② Clip the next tie around the rollers on both sides of the door panel to free up the next section.
- ③ Unroll the next section of panel from the bottom of the roll.
- ④ Push the door panel on the pallet away from the backrest. As the door panel rises, continue to push so that the next panel lines up with the panels in the track.



! CAUTION

Keep your hands flat on the panel slat and away from the hinge seal as you move the panels. Panels can shift unexpectedly.

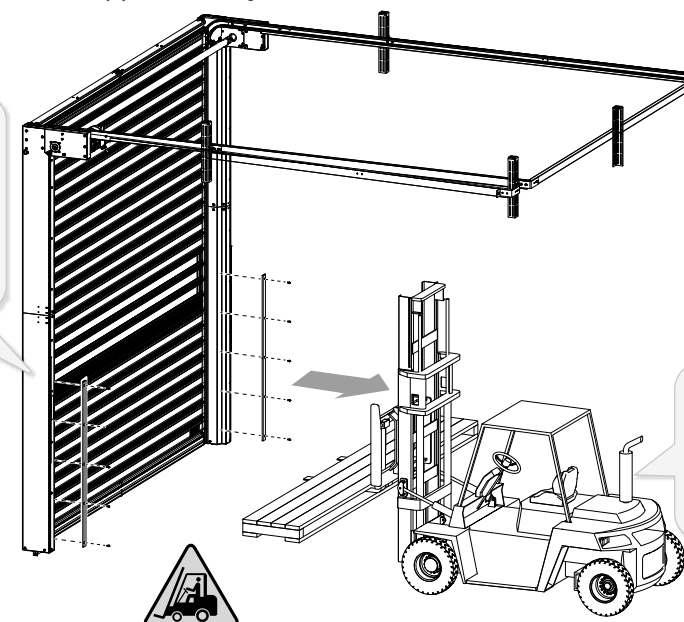


5

Stop the lift when the door panel is approximately one foot off the floor.

Reinstall the bottom section of the vertical guide track cover.

Do this on both side columns.



Move the forklift and pallet away from the door opening.

How to attach the door panel to the secondary drive belt

Things to know before you attach the belts

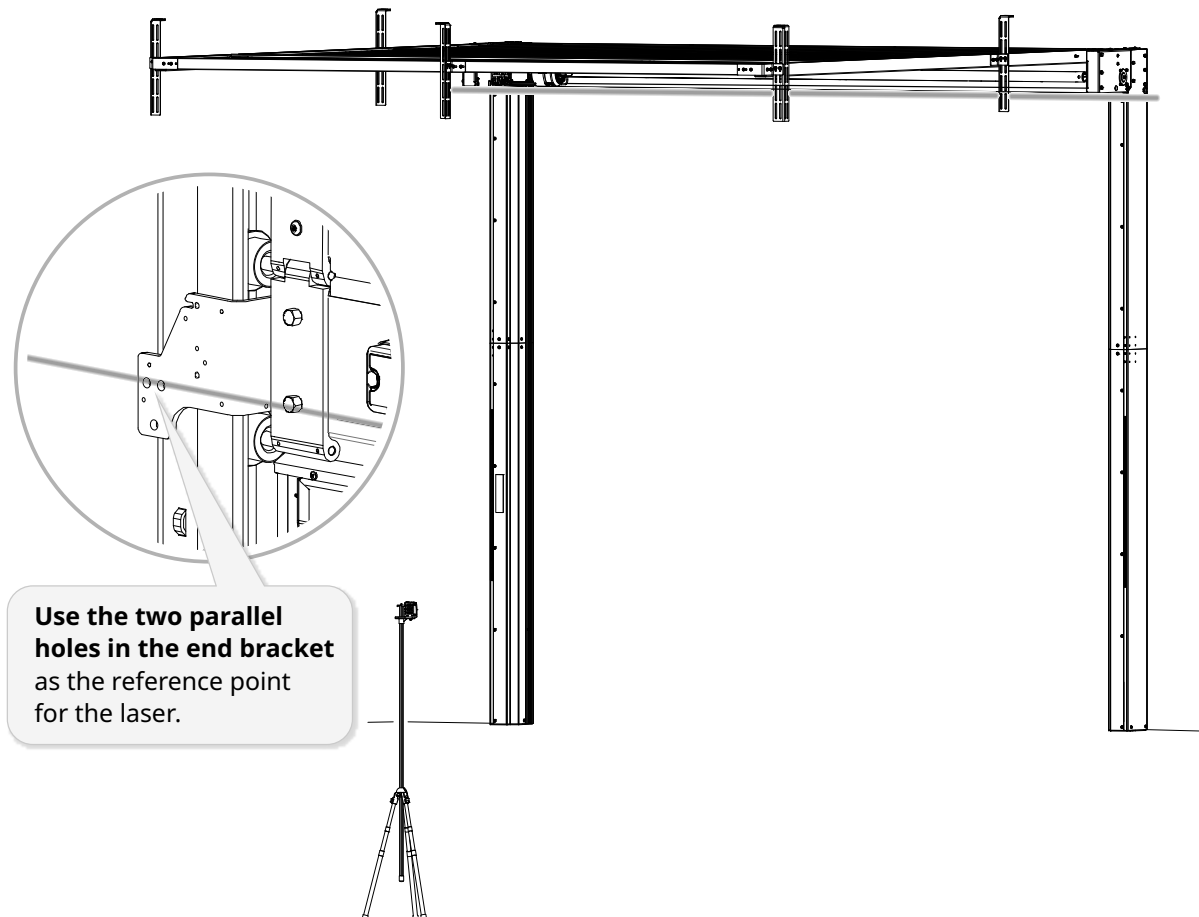
- The **splice blocks (timing blocks)** ① on the secondary drive belts connect to the door panel and are the points where the belts raise and lower the door.
- The blocks must be lined up **EXACTLY** for the door to run level.

IMPORTANT

1 Make sure the bottom bar of the door panel is level.



Laser level



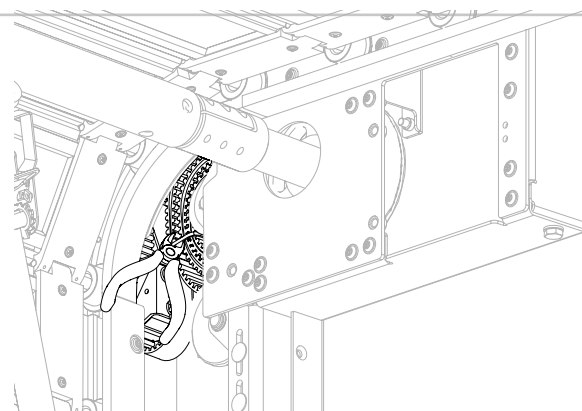
Use the two parallel holes in the end bracket as the reference point for the laser.

2 If necessary, move the door panel with the ratchet straps until the bottom bar is level.

3 Cut the tie on the secondary drive belt in the console, reach in and pull the belt down into the side column. Do this on both sides of the door.



Cutting pliers



IMPORTANT

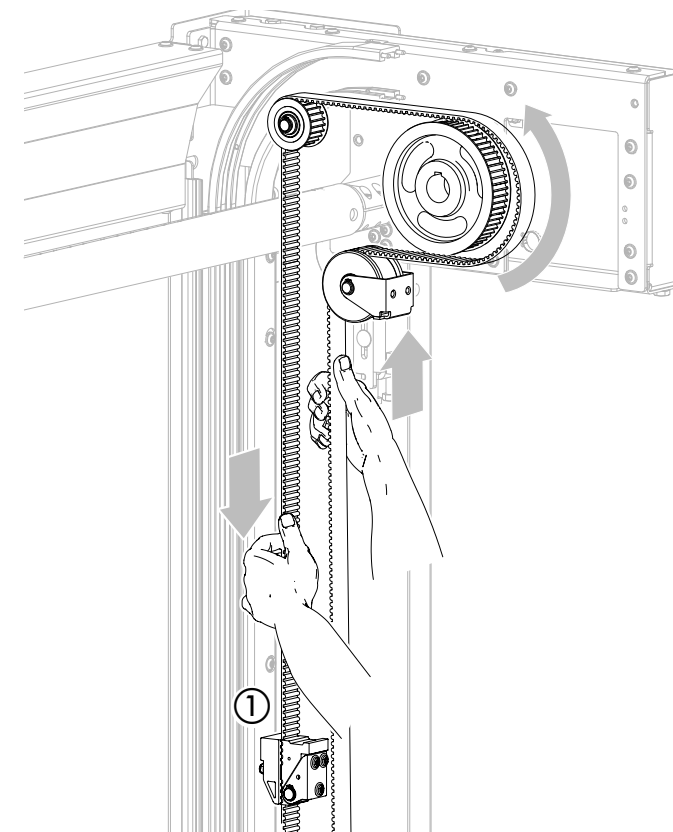
The end tabs of the bottom bar must be level after the splice blocks are installed. If they are not, the door will not operate properly.

- **Check** the door panel for level before you lower the timing block. **Recheck** it after the block is secured.
- If the door panel is not exactly aligned, **use the straps** to reposition the panel, then reset the belts.
- Resetting the belts later, when the door is fully installed, **is both difficult and potentially hazardous.**

4 Lower the splice block (timing block) ① to line up with the end bracket in the bottom bar of the door panel:

- **Push up** on the secondary drive belt until it is loose enough to move around the pulley.
- **Pull down** on the back leg of the belt to lower the block.

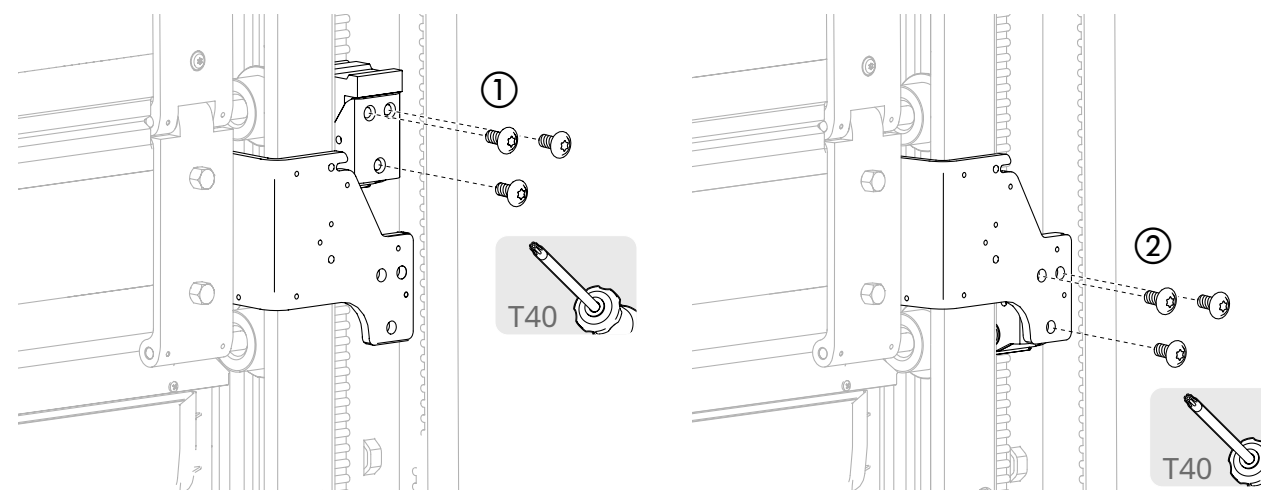
Do this on both sides of the door.



5 Remove the three screws from the splice block ①.

Use them to secure the block to the end bracket on the door panel ②.

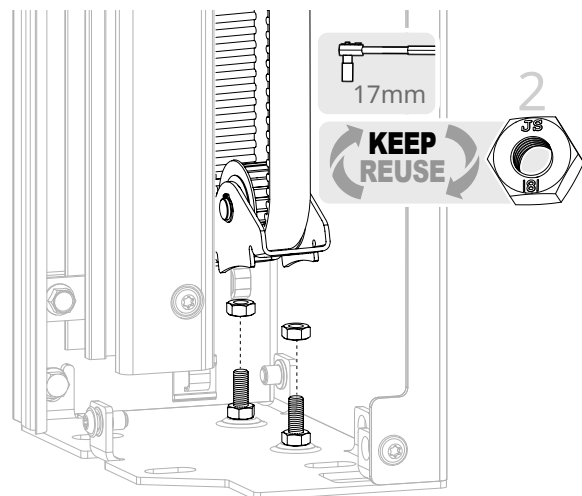
Do this on both sides of the door.



How to install the baseplate pulley assembly

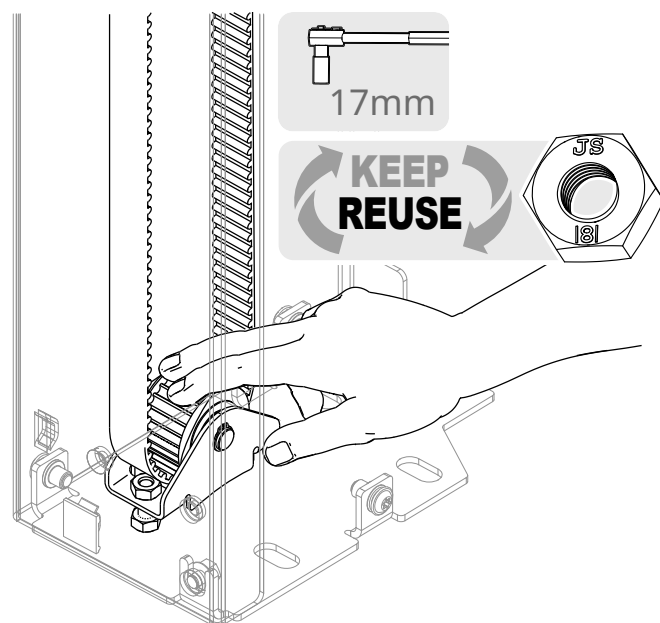
- 1** Remove the top nuts on the two baseplate mounting posts. **Keep** the nuts.

IMPORTANT DO NOT loosen the bottom nuts.

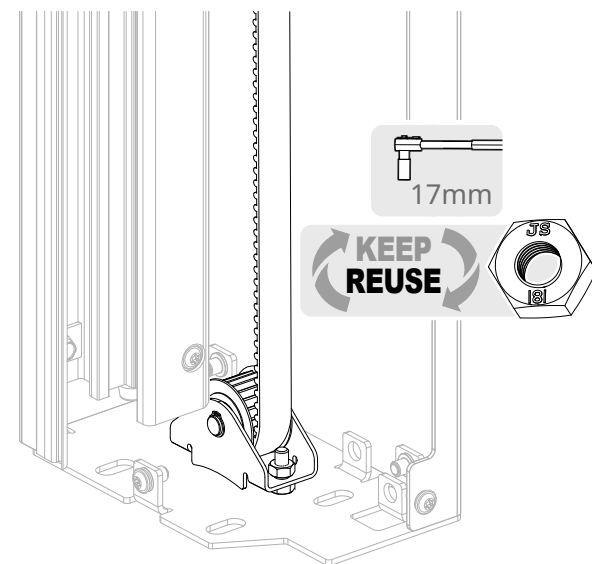


- 2** Install the pulley assembly onto the rear baseplate mounting post.

- 1: Align** the holes in the assembly with the posts.
- 2: Press down** on the pulley assembly as hard as you can.
 - You will need to see at least **three (3) threads of the mounting post clear** to reinstall the nut
- 3: Install** the rear mounting nut and tighten it as much as you can.



- 3** Reinstall the front mounting nut.
- Tighten** the nut until the front of the assembly is tight to the bottom nut.

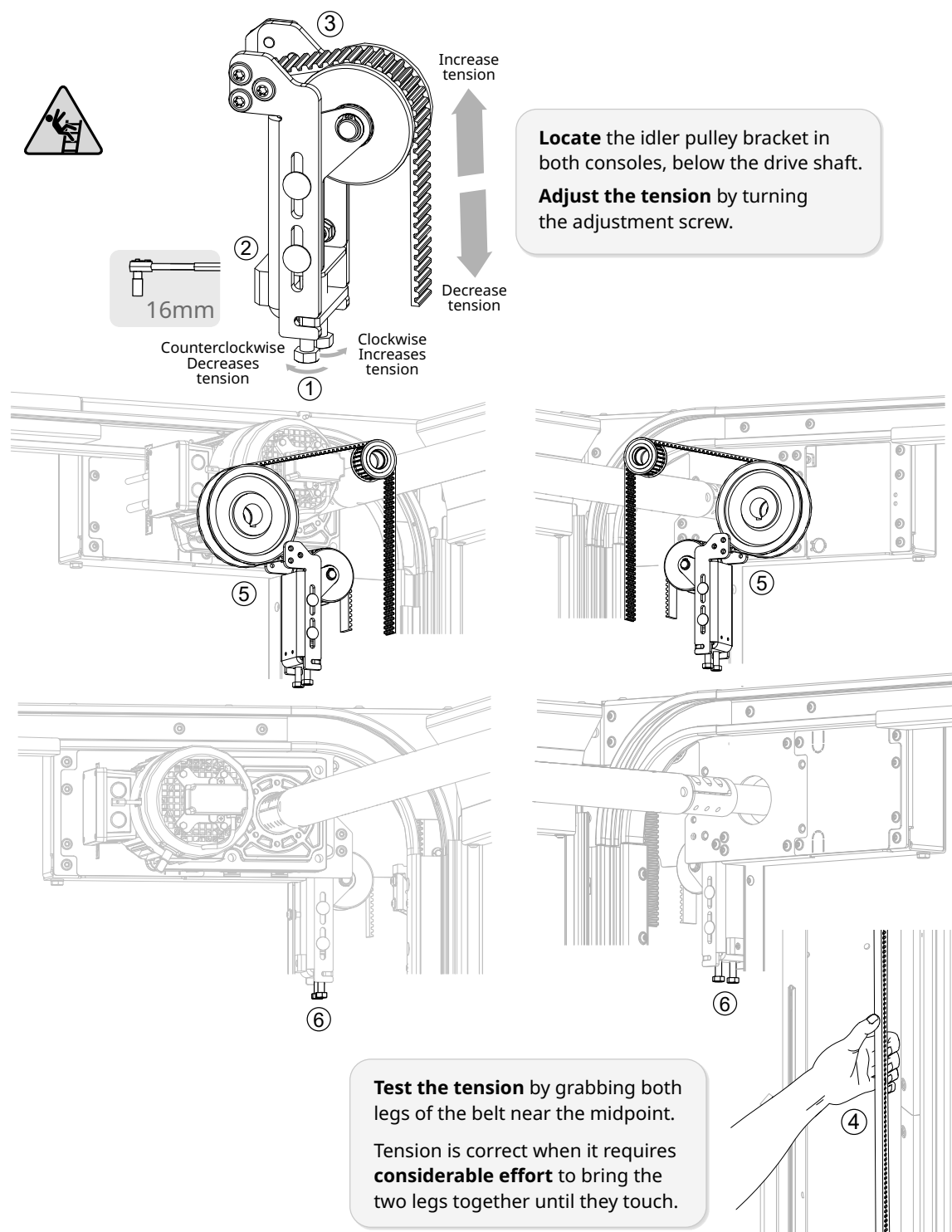


- 4** Do this in both side columns.

How to tension the secondary drive belts

Things to know about tensioning the belt

- Tension each belt** by turning the adjustment screw ① on the bracket ② that holds the idler pulley ③ for the belt.
- Test the tension** by grabbing both legs of the belt near the midpoint ④. Tension is correct when it **requires considerable effort** to bring the two legs together until they touch.
- The adjustment screws are reached through both the **side of the non-drive side console**, and through the **side of the drive side console** ⑤.
- Before adjusting the tension, **loosen** the one nut and two screws ⑥ that secure the bracket so that it moves easily when the adjustment screw is turned. **Tighten** them when tension is set.

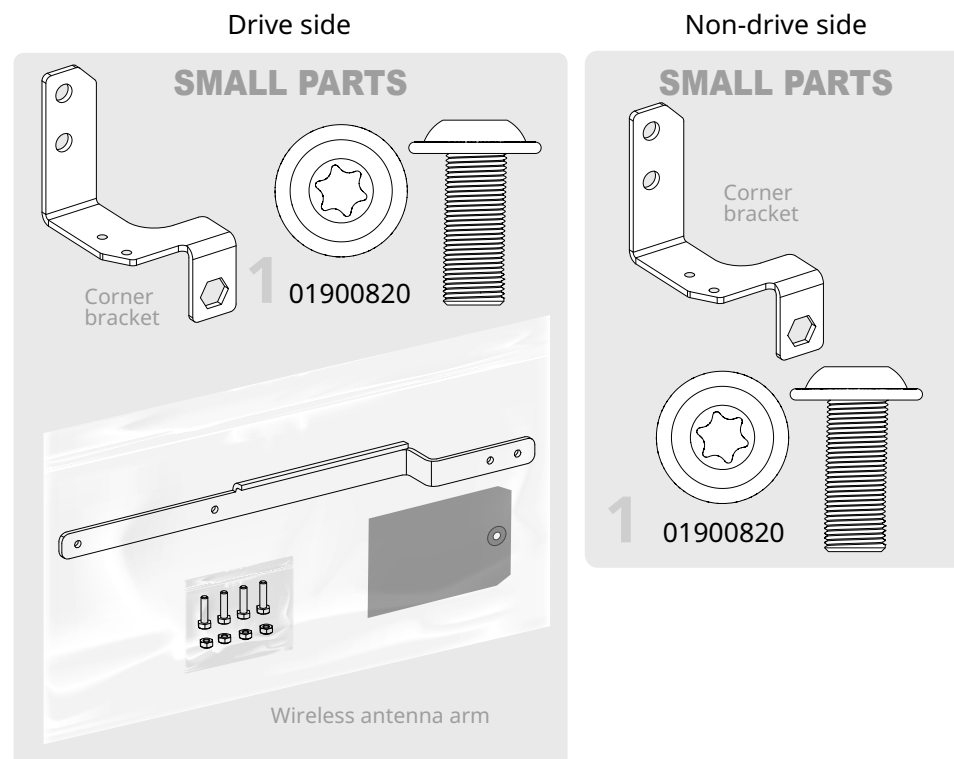


How to install the corner brackets and wireless antenna

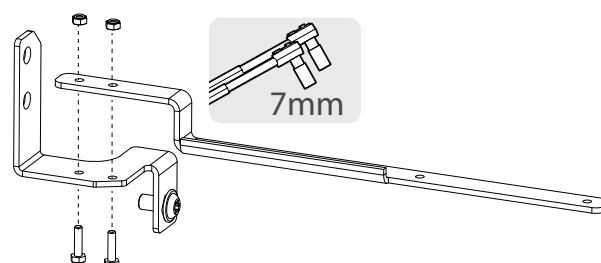
1 **Locate** the corner brackets, wireless antenna arm and hardware in the small parts box.

Install a corner bracket on each side column.

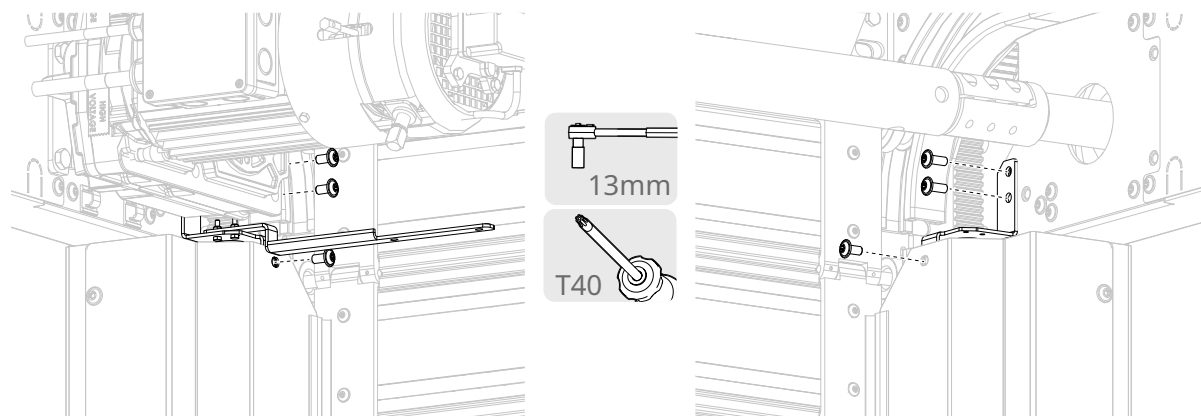
- **The drive side bracket** holds the wireless antenna arm and has an extra screw hole to secure the side panel cover.
- **The non-drive side bracket** has an extra screw hole to secure the side panel cover.



2 **Install** the wireless antenna arm onto the drive side corner bracket using the included hardware.

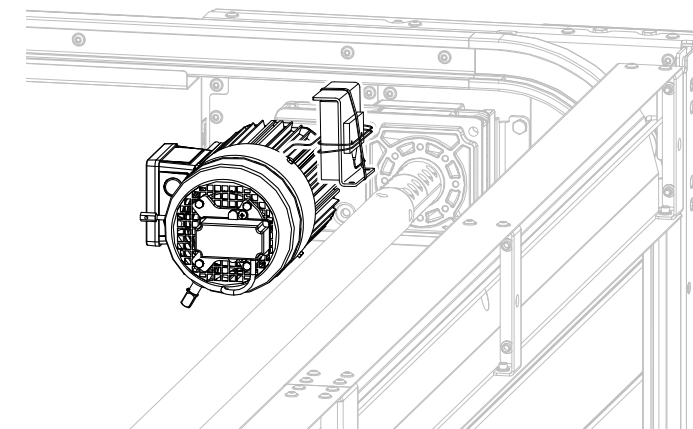


3 **Install** the corner brackets. Each bracket uses one nut from the console.



4 **Reach** into the drive side compartment and **remove** the wireless antenna and antenna bracket from the top of the motor.

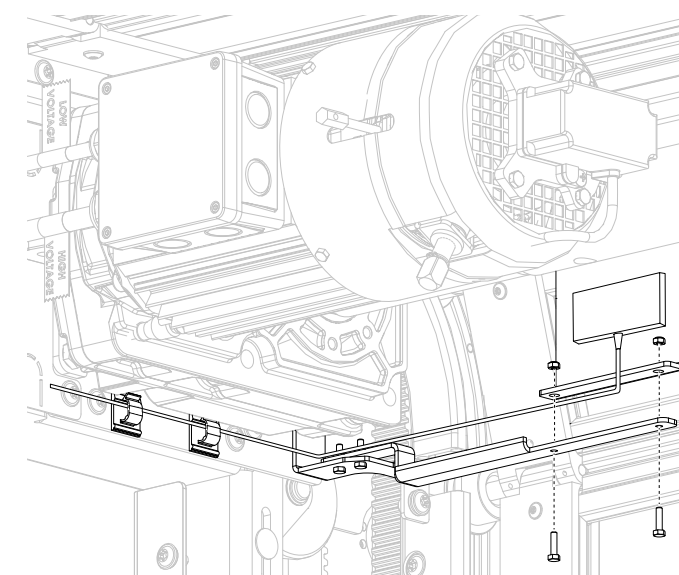
Unwrap the antenna cable.



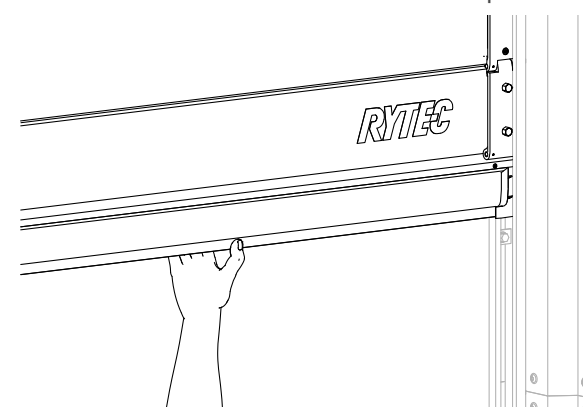
5 **Install** the wireless antenna bracket onto the wireless antenna arm.

Use the hardware included with the arm.

Run the cable under the clips ① in the console.



6 Try to **manually move** the door panel up and down. You should **NOT** be able to move the panel.



How to run the drive side cables for Pathwatch and light curtain

- 1** **Gather** the two cables and **run** them through the side cable port on the column.



Pathwatch

Light curtain

Locate the cable port on the outside of the column.

- 2** **Route** the Pathwatch cable and cable and light the light curtain cable through the port on the side of the column.

IMPORTANT

Location of the **junction box** will be determined in the field.

How to run the non-drive side cables for Pathwatch and light curtain

- 1** **Gather** the two cables together.



Electrical tape

Pathwatch

Light curtain

INSIDER'S TIP

Tape ends of cables together and run them together.

Make sure both cables run cleanly, with no slack, kinks or loops. Check whole length of cable as you go.

- 2** **Run** the cables through the rear cable port in the console and across the rear seal (rear spreader).



Cable ties and self-adhering anchors

Locate the cable port on the top rear of the column.

Use self-adhering anchors. **Place** first anchor on top of console. **Set** anchors at 3-foot intervals.

- 3** **Splice** the Pathwatch cables together above the drive side console. **Run** the splice cable to the controller.



Wire stripper



Wire nuts and electrical tape



Cable ties and self-adhering anchors

Add cable tie attached to console around cables beyond splice point.

Tape all three cables together for strain relief.

IMPORTANT

Use UL-rated wire nuts.

4 Run the non-drive side cable together with the drive side cable through port and out front panel.

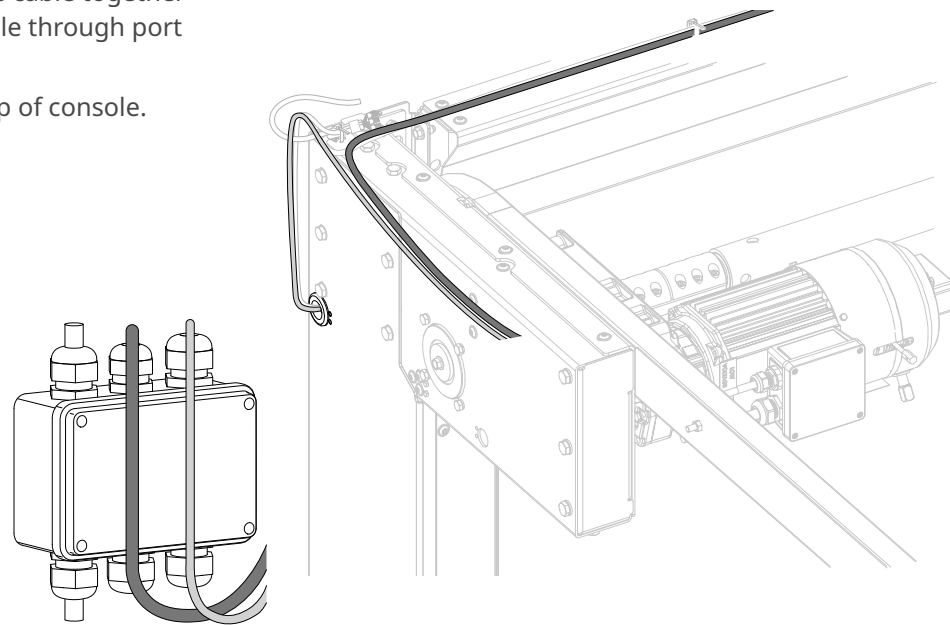
Tie cables down to top of console.



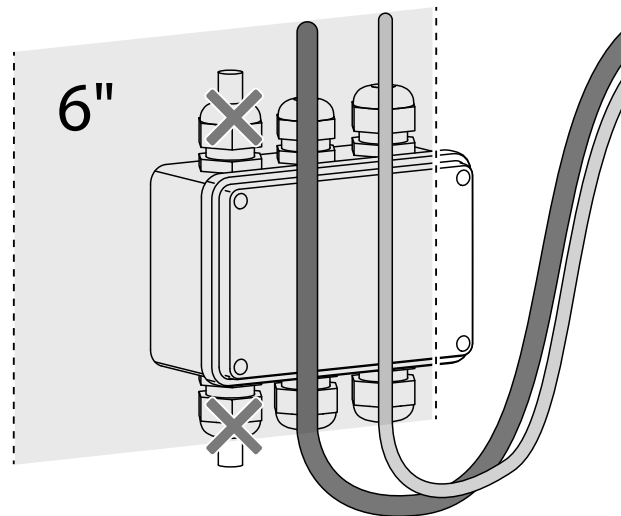
Cable ties
and
self-adhering
anchors

IMPORTANT

Location of
the **junction
box** will be
determined
in the field.

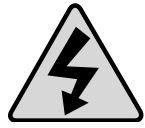


5



1. **Line up** cables with bottom cable grips.
 2. **Add 6"** to length of cable.
 3. **Trim** cable.
- X = do not use front cable grips.**

How to install the System 4 controller and wire the door

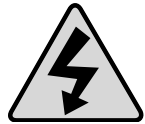


⚠ WARNING

All electrical work must meet all applicable local, state and national codes.

It is recommended that all electrical work be done by a certified electrician.

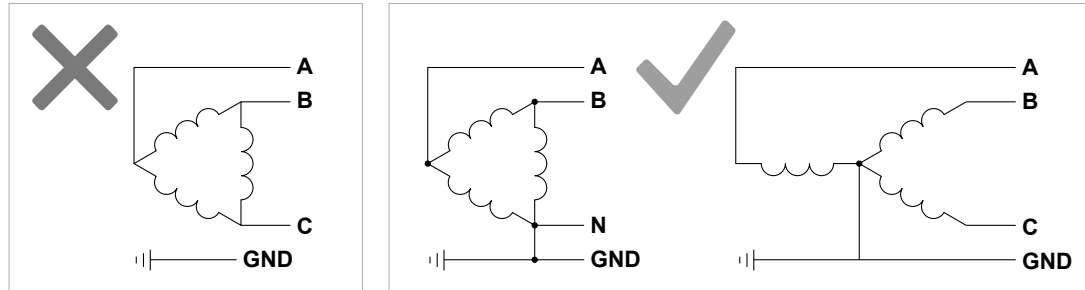
Failure to wire the door correctly could result in shock, burns or death to the people who install, use or service the door.



⚠ WARNING

The high-voltage power to the controller must be properly grounded.

Improper grounding could result in shock, burns or death to the people who install, use or service the door, as well as catastrophic motor failure.



- If the service is floating, ungrounded or open delta type power, an isolation transformer must be installed.
- Metal conduit entering the bottom left of the control box contacts the metal protection ground plate inside the controller. **If non-metallic conduit is used**, a protection ground conductor must be used.

IMPORTANT

The System 4 installation must meet all of the standards and follow all of the steps shown in these instructions. Failure to do so voids the warranty for the door.

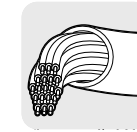
- **The high-voltage and low-voltage conduits must be separated** by a distance that meets all applicable federal, state and local codes and regulations.
- **Wires must be cut to length.** Do not loop wires or leave excess length untrimmed.
- **Use shielded wiring** where indicated in these instructions.
- **If you splice wires:**
 - You must use the same gauge wire for the entire length. Gauge is listed in the steps in these instructions.
 - All spliced field wiring must maintain the voltage and temperature rating supplied by Rytec.

Contact Rytec technical support at 800-628-1909 or email helpdesk@rytecdoors.com before starting the installation if you cannot meet any of these standards or have questions about how to implement them.

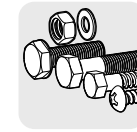
Before you begin

1 Make sure you have all supplies and tools.

Supplies that you provide

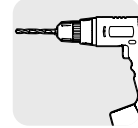


Conduit for high-voltage and low-voltage wiring



Mounting hardware for controller (3 anchors)

Tools you will need



Power drill



Step drill bit



#2 Phillips



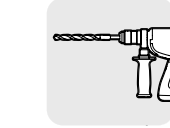
T20 Torx screwdriver



Precision screwdriver



Wire tool



Cement drill (if needed to mount controller)

2 Check the job site.

- **The ambient temperature** must be between **-4°F** and **149°F** at all times.
NOTE: for freezer doors, the controller and fused disconnect must be mounted on the warm side of the door.
- **The mounting surface** for the System 4 controller and fused disconnect must be structurally sound and free of mechanical shock and vibration.

3 Install the high-voltage power supply.

- **Provide a high-voltage power supply** that matches the electrical spec for the System 4 controller.
- **A fused disconnect is recommended.** Fuses must meet NEC code for FLA listed on the electrical spec for the System 4 controller.

4 Make sure the high-voltage and low-voltage cables from the head assembly of the door are separate. Cables may be routed through the top ① or bottom ② port at the back of the belt guard cover.



Label the controller end of the cables. Label them again if you cut or trim them.

High Voltage

Low Voltage

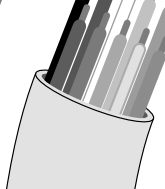
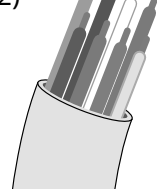
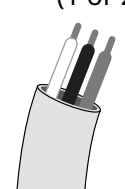
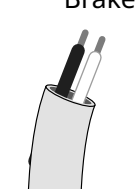
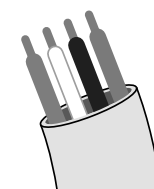
Motor power

Brake

Pathwatch (1 or 2)

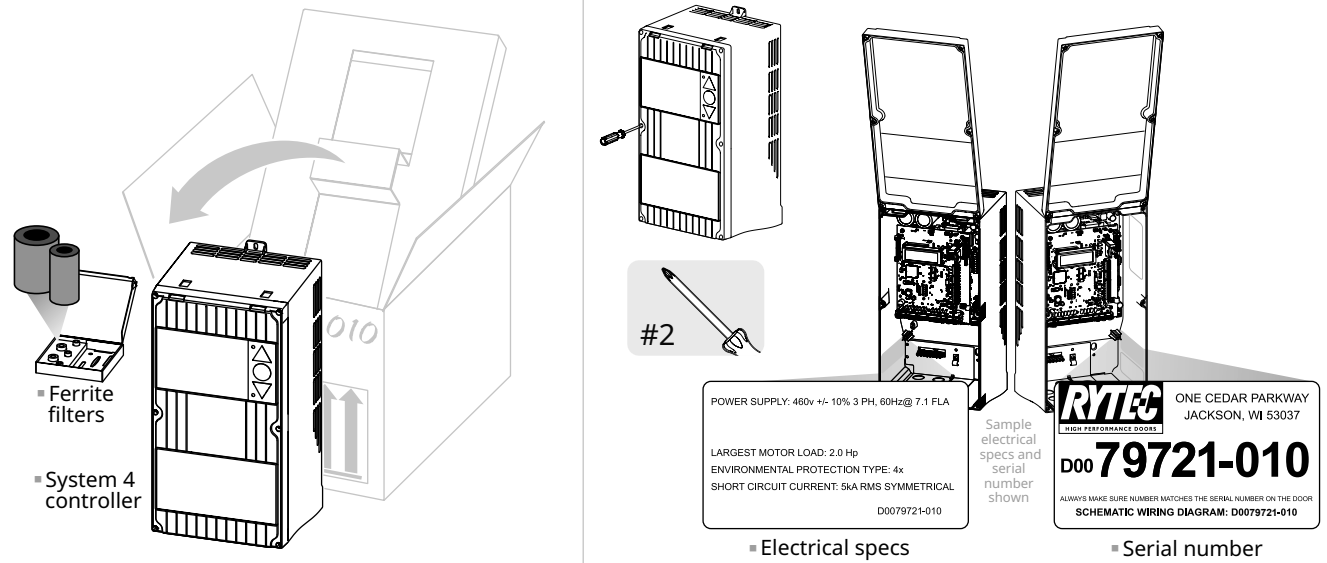
Encoder

X-10 junction box



How to install the System 4 controller

- 1 **Open** the System 4 controller box and get the controller and ferrite filters.
Loosen screws on the control box and **open** the cover panel.

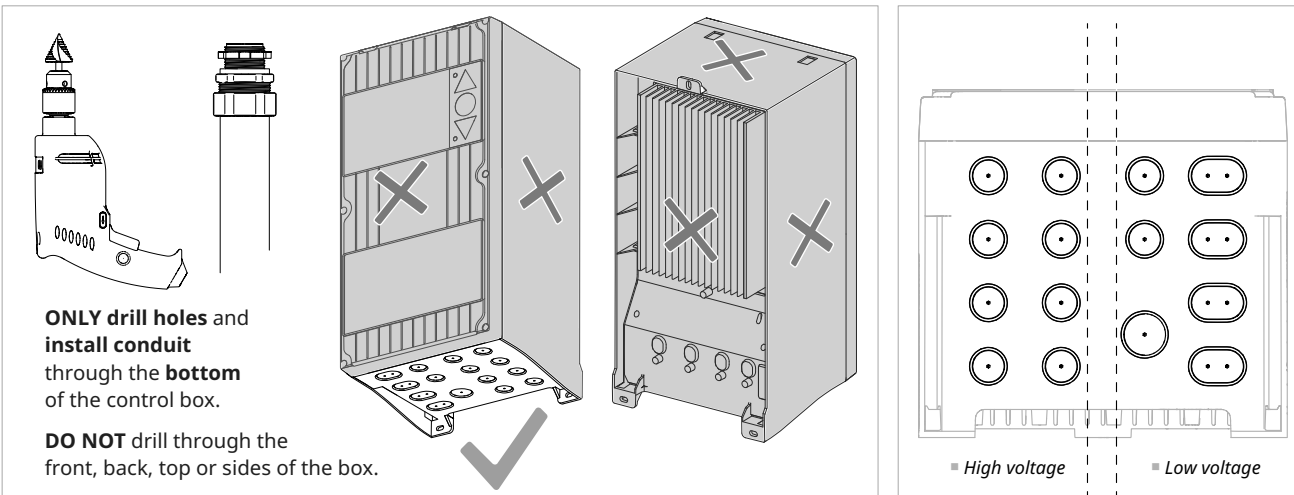


Verify that the serial number and electrical specs for the controller match the door.

- 2 **Install** the control box onto the wall using the hardware you have supplied.

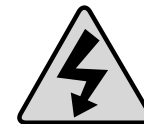
- 3 **Drill** holes through the bottom of the control box for the conduit.

- IMPORTANT**
- **Conduit must enter through the bottom of the control box.** Drilling holes in the **front, back, top or sides** of the control box voids the warranty.
 - **High-voltage wires** must enter through the left side of the box bottom.
 - **Low-voltage wires** must enter through the right side of the box bottom.
 - **Holes must be drilled.** The indentations in the box bottom are not knockouts.



How to install the high-voltage wiring

⚠ WARNING



Set the disconnect switch to the OFF position and perform a lockout/tagout of the high-voltage disconnect before installing wiring to the controller. Do not set the disconnect switch to the ON position until the wiring installation is complete and the controller is fully earth grounded per instructions.

Failure to comply could result in shock, burns or death.

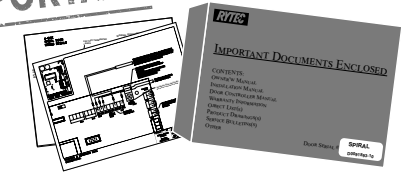


Find the schematics for the door in the red document envelope.

Check the crate and small parts boxes for accessories such as activators or safety devices and any schematics included with them.

If the schematics indicate the door has non-standard wiring, **follow the schematics** instead of this manual.

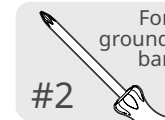
IMPORTANT



- 1 **Connect** the supply voltage wiring from the disconnect.



DO NOT use power tools

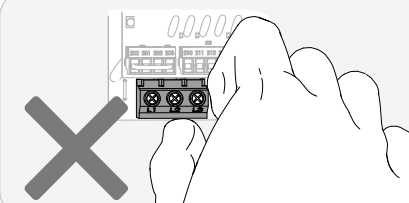


For ground bar



For terminals

12 AWG

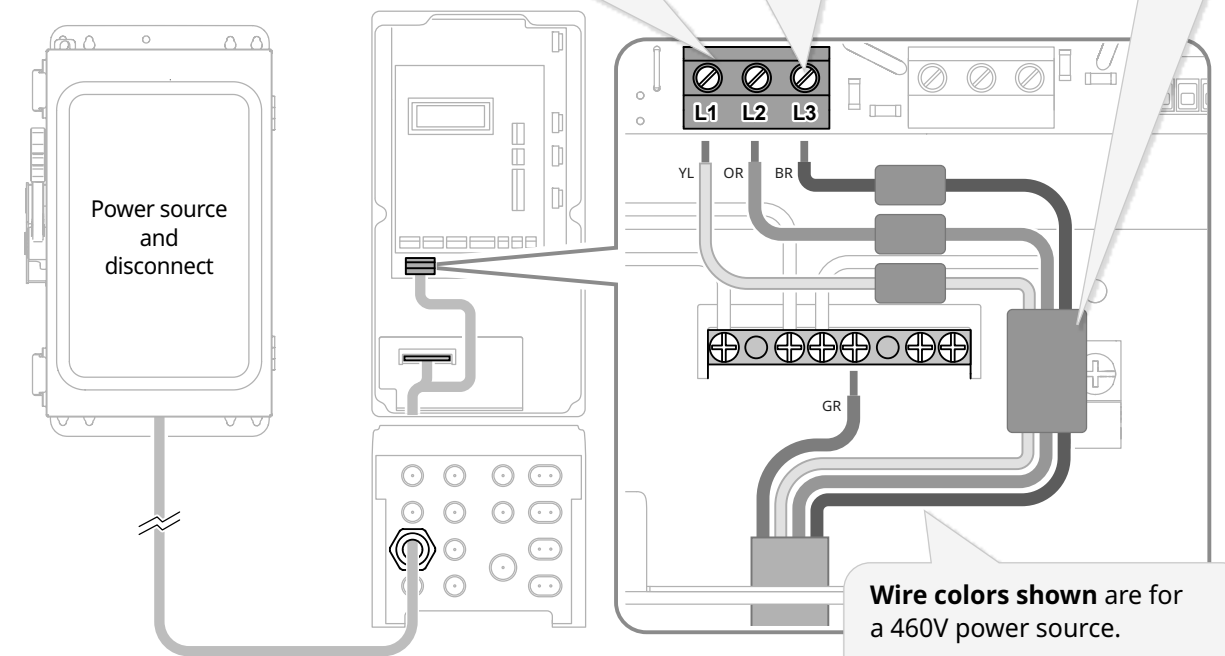


Do not try to remove the green terminal block from the circuit board.

It is fixed in place and will break.

Maximum torque for all screws is **2.5 in-lbs.**

Place one large ferrite filter around all three wires, and **one small filter** around each individual wire.



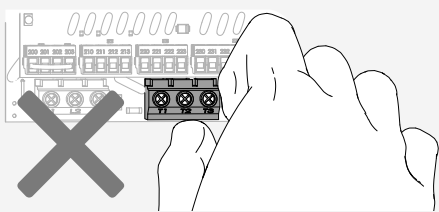
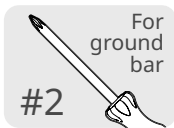
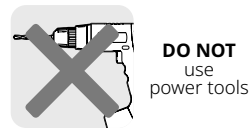
Wire colors shown are for a 460V power source.

Wire colors for 230V power are L1=red, L2=black, L3=blue.

2 Connect the high-voltage wiring from the motor.

Shielding: braided copper mesh and drain wire

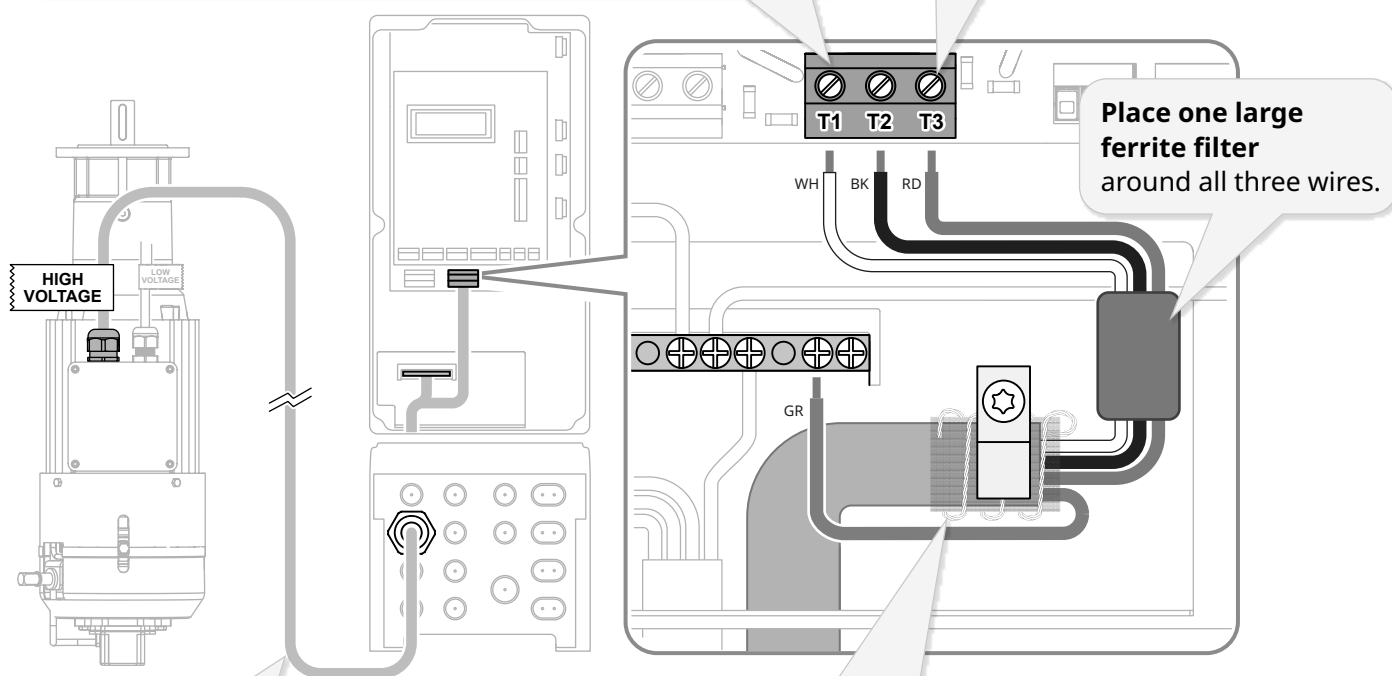
16 AWG



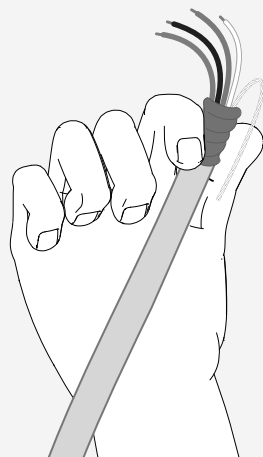
Do not try to remove the green terminal block from the circuit board. It is fixed in place and will break.

Maximum torque for all screws is 2.5 in-lbs.

Place one large ferrite filter around all three wires.



Maximum wire length between motor and controller: 100' (one hundred feet).



The **shield** (braided copper mesh) and **drain wire** (bare metal) must be in contact with the **P-clip**.

To ensure a tight contact:

1. Loosen the P-clip.
2. Strip high-voltage cable jacket to expose braided shield, then pull back shield and wrap drain wire around it.
3. Run wires, shield and wrapped drain wire under clip.
4. Tighten clip.
5. Trim excess drain wire.

How to install the low-voltage wiring

IMPORTANT

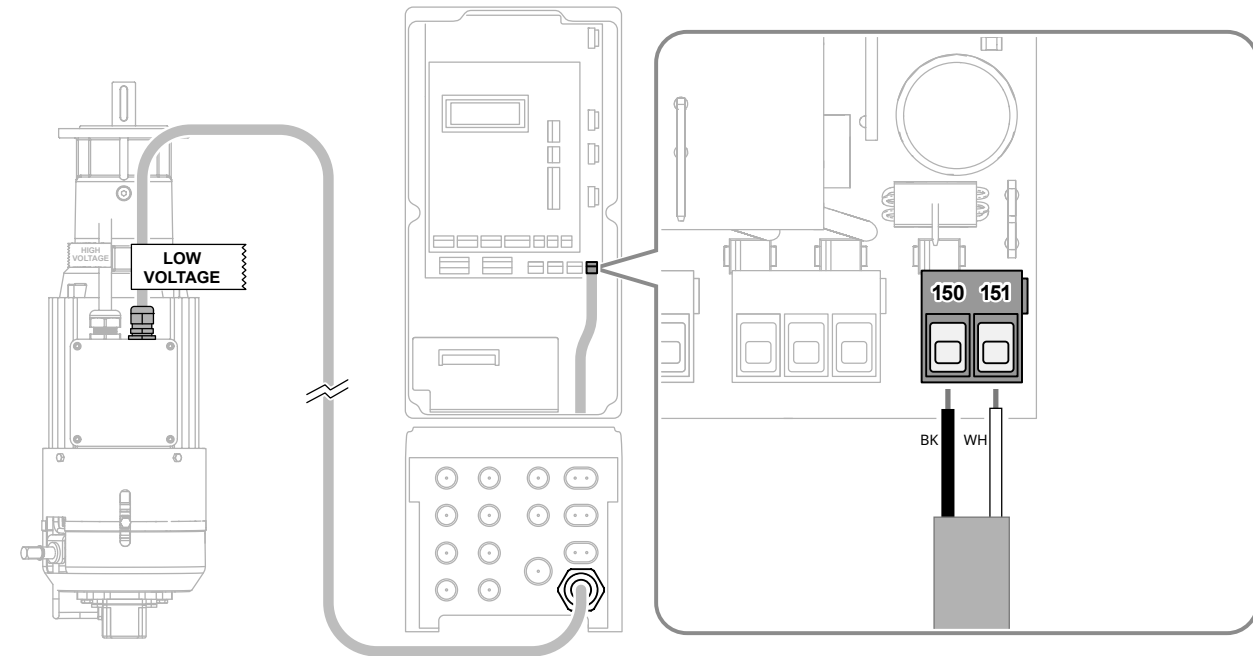


- Low-voltage wires can be run in the **same conduit**.
- All low-voltage wiring must be 24 VDC+ only, installed per NEC to Class II power supply requirements.
- Maximum torque for all System 4 controller screws is **2.5 in-lb**. **DO NOT use power tools.**

1 Connect the brake wiring from the motor.

Shielding: unshielded

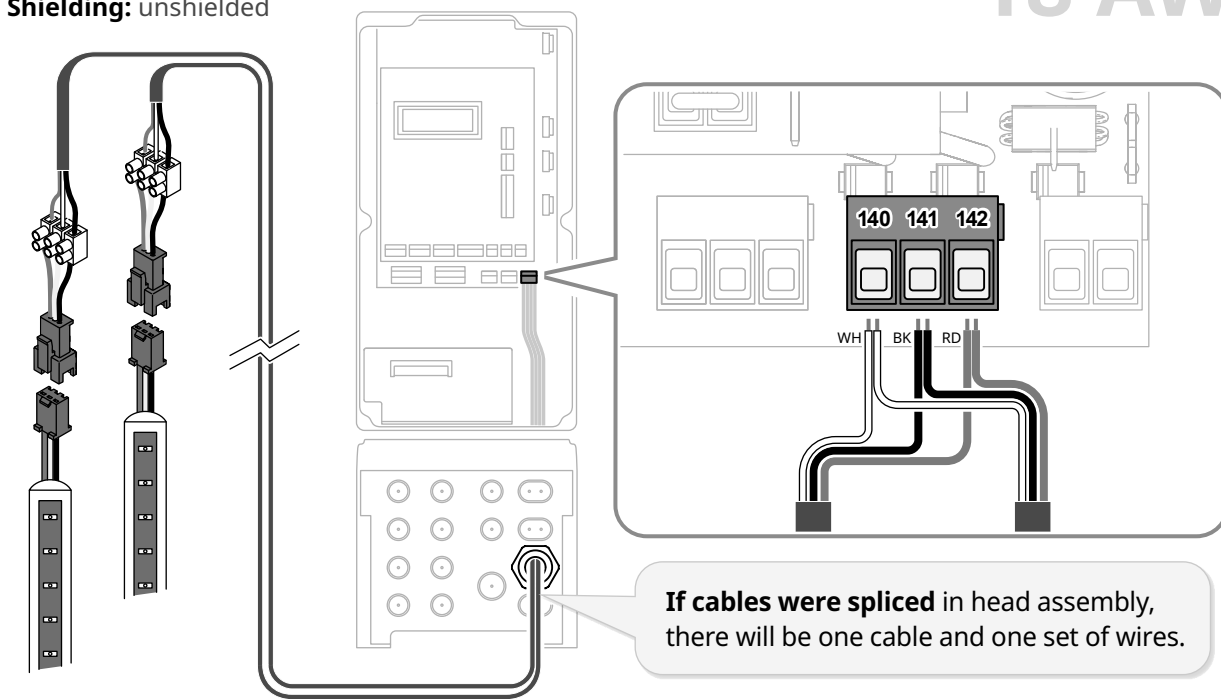
18 AWG



2 Connect the wiring from the Pathwatch LED strips.

Shielding: unshielded

18 AWG



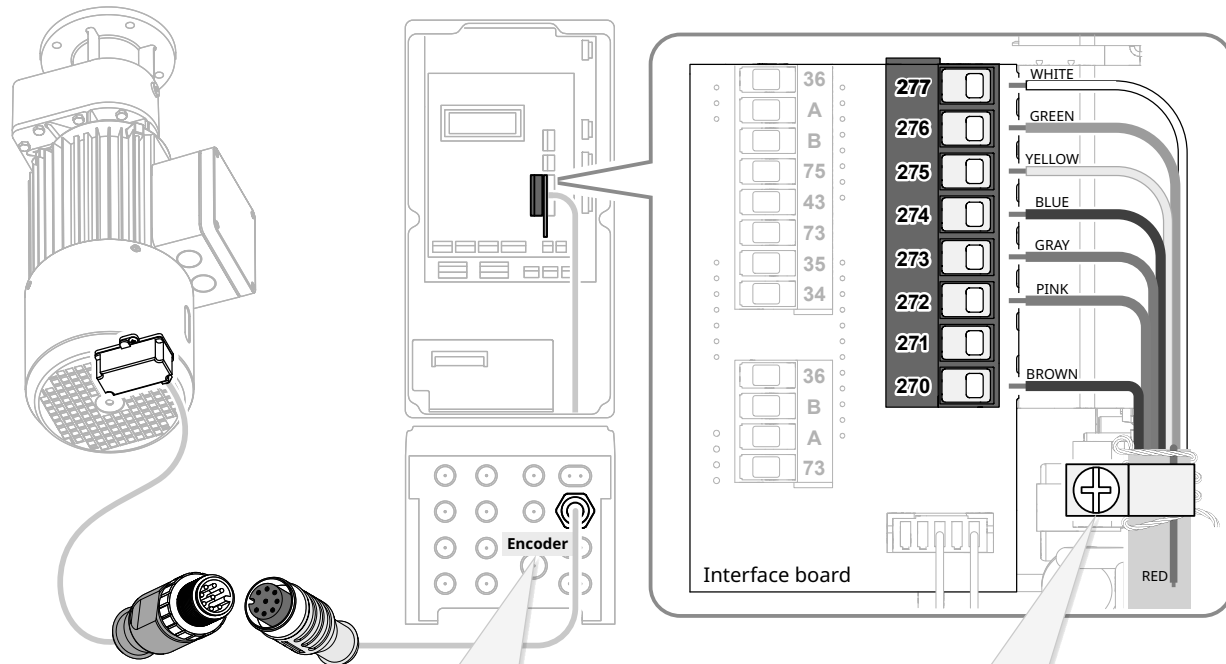
If cables were spliced in head assembly, there will be one cable and one set of wires.

3 Connect the wiring from the encoder. Shielding: metal foil and drain wire

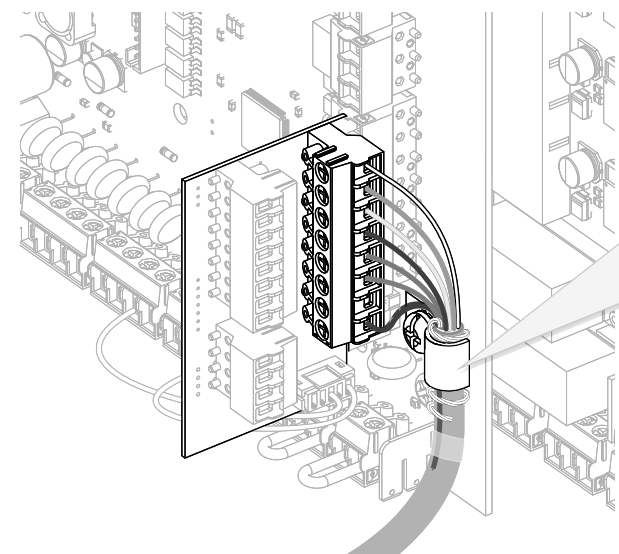
24 AWG

IMPORTANT

Encoder wiring must not be spliced unless you have consulted with Rytec technical support at 800-628-1909.



Mark controller end of cable as "Encoder"



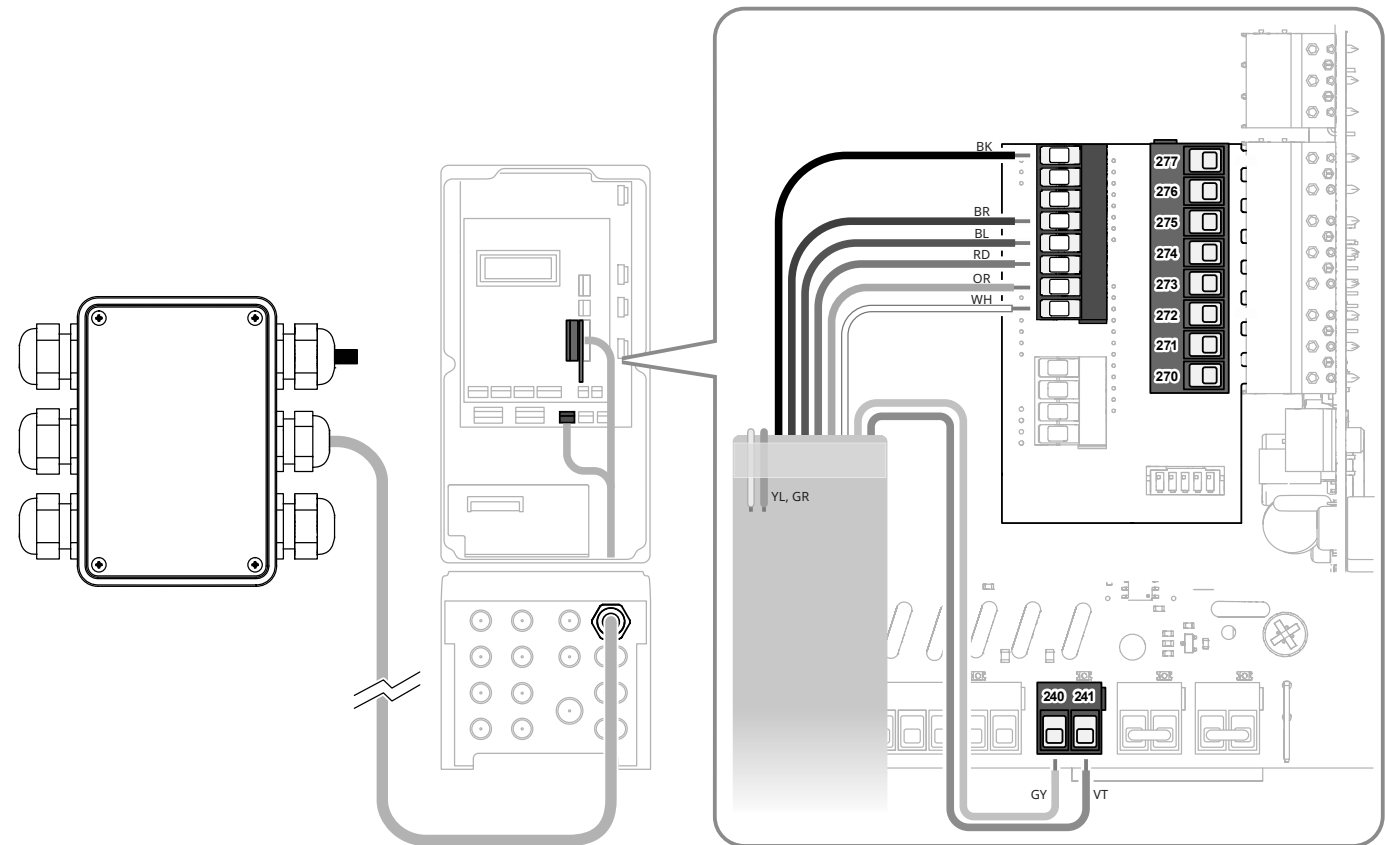
The **drain wire** (bare metal) must be in contact with the **P-clip**.

To ensure a tight contact:

1. Loosen the P-clip.
2. Strip encoder cable jacket to expose wires.
3. Trim and bend red, pink, gray and blue wires. Tape to jacket.
4. Wrap drain wire around jacket and unused wires.
5. Slide cable under P-clip and tighten.
Make sure there is maximum contact between clip and drain wire.
6. Trim excess drain wire.

4 Connect the wiring from the X-10 junction box. Shielding: unshielded

24 AWG



Before powering up the door

WARNING

It is recommended that this pretest be done by a certified electrician.

1 Make sure the power to the door is correct.

- Open the System 4 control box and check the power supply listed on the label inside.
- Test the voltages at the disconnect. Test leg to leg and leg to ground.
- If power is correct, power up the door and start the set limits sequence.

Multimeter

#2

POWER SUPPLY: 480v +/- 10% 3 PH, 60Hz@ 7.1 FLA

LARGEST MOTOR LOAD: 2.0 Hp

ENVIRONMENTAL PROTECTION TYPE: 4x

SHORT CIRCUIT CURRENT: 5kA RMS SYMMETRICAL

D0079721-010

Sample electrical specs shown

How to set limits and test the door

CAUTION

Make sure that people and vehicles do not pass through the open doorway until the automatic calibration is complete. The door can open or close unexpectedly, resulting in injury.

The Controller Display

0 = Operator level access
S = Service level access
Service level accesses more parameters

Parameter name

P: Password 0

001= 1979 Cyc

Parameter number

All three digits are hexadecimal

Parameter value

? = value being changed
✓ = change saved

Blinking cursor

On left side of display: press arrows to change parameter number
On right side of display: press arrows to change paramter value

The Controller Controls

Stop/Reset Button

Press to toggle the flashing cursor between left and right

Press and hold to save changes to a value

UP Arrow

Press to increase a value or a parameter number

Press and hold arrows to cycle quickly

DOWN Arrow

Press to decrease a value or a parameter number

NOTE: The System 4 display uses hexadecimal numbers to number parameters and for some values.

The display uses the ten numeric characters (0-9), plus six letters (A-F), which represent the values from 11 through 16.

In some cases it will be necessary to press the UP arrow sixteen times to change a value from 0000 to 0010.

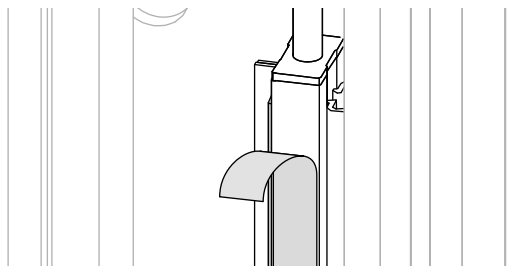
Icon key

Press

Press and hold

Press UP or DOWN arrow, as needed

Make sure the protective film has been removed from both light curtains before turning on power to the door.



Do This

Result

1

Turn on power to controller

The sequence starts. Scrolling message: Press Reset button to begin

! Synchron. !
_0 Press Reset

2

Scrolling message: Hold Reset button if position OK

># To Open Pos.
_0 Hold Reset

3

Resume the sequence and set the open position

Until open height is correct

># To Open Pos.
_0 Hold Reset

The top of the end brackets should align with the bottom of the radial guide track.

4

5 sec.

Open Limit Set
_0

LGx Qual. Check
_0

! Synchron. !
_0 Press Close

Scrolling message: Press Close button to begin

5

Search Edge
_330_Auto Close

!Auto Calibrate!
Press Open butto

The controller lowers the door panel to the bottom of the light curtains and waits.

6

Ac11 = 45Sec
Object 232

Door Is Closing
1515 Limit Corr.

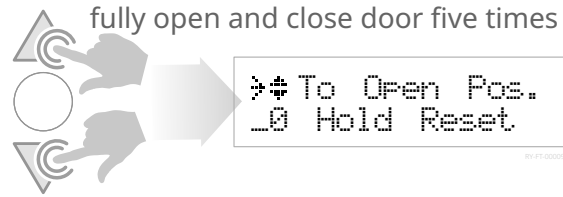
Spiral
12 Cycles

The door opens and closes automatically several times. When calibration is complete, the door switches to Run mode.

IMPORTANT The door may not close completely during automatic calibration. This is normal. When calibration is complete, the door will close correctly.

You can now test the door.

What to test after powering up the door



Press and hold the arrows to fully open, then fully close the door five (5) times.

1 Does the door panel move in the right direction?

Test: The direction of the door should match the direction of the arrow on the controller.

Yes: no action is needed.

No: follow the steps in *How to reverse the rotation of the motor*.

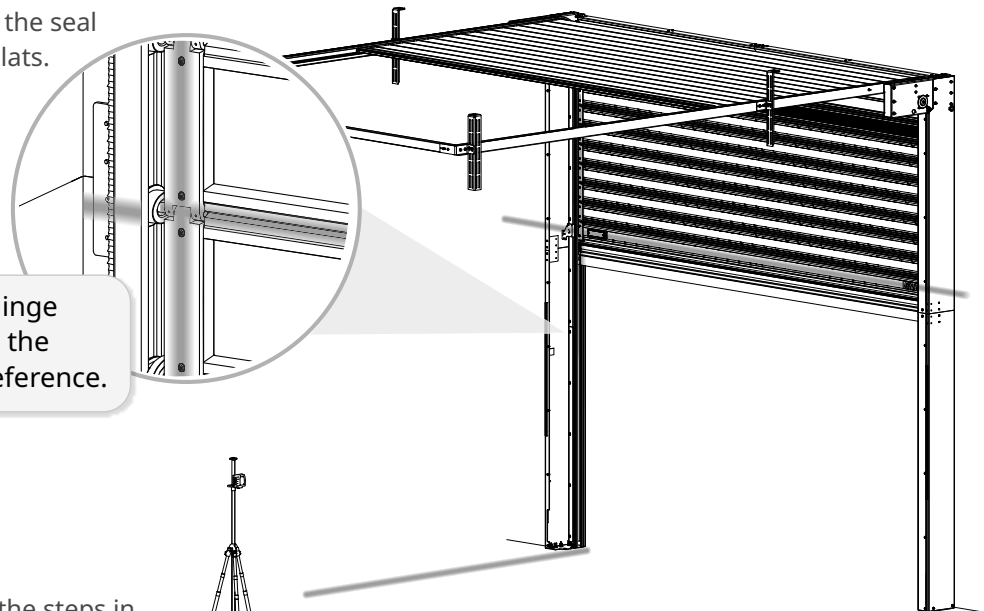
2 Is the door panel level and plumb?

Test: laser the door along the seal between two door panel slats.



Laser level

Use the hinge screws as the vertical reference.



Yes: no action is needed.

Panel is not level: follow the steps in *How to adjust the secondary drive belt*.

Panel is not plumb: contact Rytec technical support at 800-628-1909.

3 Is the door operating correctly?

Test: listen for grinding, whining or excessive motor noise. Watch for changes in speed or excessive movement of the motor or drum

Yes: no action is needed.

No: contact Rytec technical support at 800-628-1909.

How to reverse the rotation of the motor

First: set the controller to Parameter mode and access Service level parameters

Do This	Result
1 5 sec.	P: Password 0 001= [xxx] Cyc
You are in Parameter mode. Go to parameter 999.	
2	P: Password S 999= 0010 #
until 999 displays The Password parameter (999) screen displays.	
3	P: Password 0 999= 0000v#
You can now change the value of parameter 999.	
4	P: Password 0 999= 0010?#
Set the value to 10 (Service level password).	
5 5 sec.	P: Password S 999= 0010v#
The Service level password is saved. ■ You must press and hold the Stop/Reset button for five (5) seconds to save the change.	
6	P: Password S 999= 0010 #
You can now go to parameter 130.	

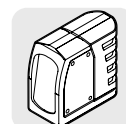
Next: navigate to Parameter 130 and change the value

Do This	Result
1	P: Mtr Rotation S 130= 0 #
Value is either 0 or 1.	
2	P: Mtr Rotation S 130= 0v#
You can now change the value.	
3	P: Mtr Rotation S 130= 1?#
press either arrow to change value	
4 5 sec.	P: Mtr Rotation S 130= 1v#
The new value is saved. ■ You must press and hold the Stop/Reset button for five (5) seconds to save the change.	
5 5 sec.	To Open Pos. Hold Reset
You return to the set limits sequence.	

How to adjust the secondary drive belt

	<p>⚠ WARNING</p>	
<p>Do not perform this procedure until the power disconnect is in the OFF position and a lockout/tagout is complete.</p>		
<p>Contact with high-voltage wires, or the door being activated unexpectedly, can cause death or serious injury.</p>		

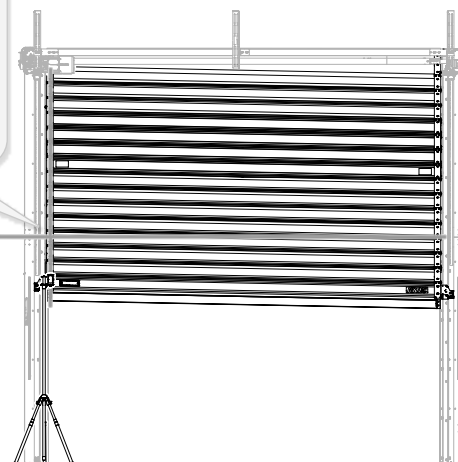
1



Laser level

IMPORTANT

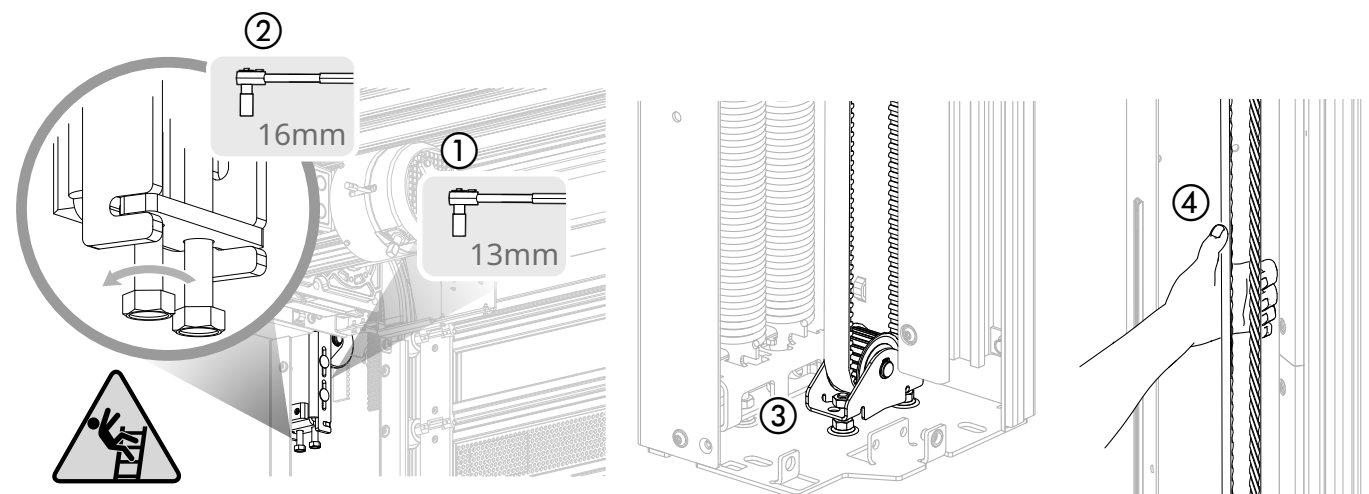
Always adjust the belt to **lower** the side of the door panel that is **higher**.



2

Loosen the secondary drive belt until there is considerable slack.

- 1: **Loosen** the restraining bolts on the idler bracket ①, then **turn** the adjustment screw ② **counterclockwise** until the bracket stops moving forward.
- 2: If necessary, **loosen** the front nut on the baseplate pulley assembly ③. **DO NOT remove** the nut.
- 3: **Check** the belt ④ for slack.

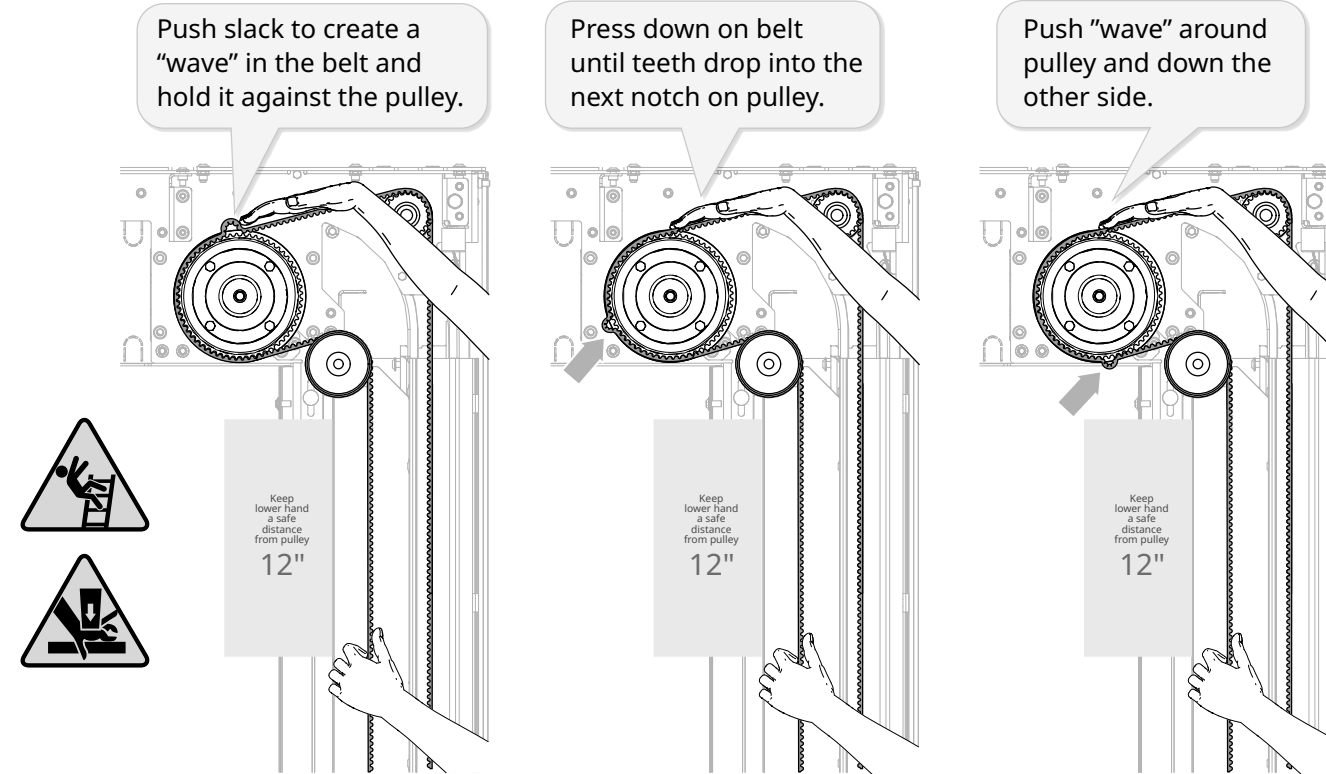


3

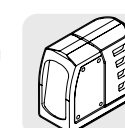
In the console with the higher belt, **“jump”** the **secondary drive belt** one notch in the pulley.

IMPORTANT

Adjust the belt **one tooth at a time**, then recheck level.



4



Laser level



















Level the door panel again.

If the door panel is not level, repeat these steps and retest.






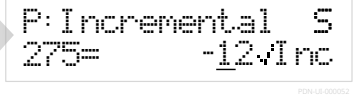


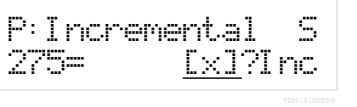






If the door panel is level, reset the tension on the belt.

How to manually reset the close limit (optional)

First: set the controller to Parameter mode and access Service level parameters









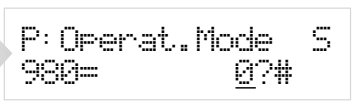








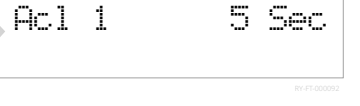
Do This	Result
1  5 sec. 	 <p>You are in Parameter mode. Go to parameter 999.</p>
2  	 <p>until 999 displays The Password parameter (999) screen displays.</p>
3  	 <p>You can now change the value of parameter 999.</p>
4  16x 	 <p>Set the value to 10 (Service level password).</p>
5  5 sec. 	 <p>The Service level password is saved. ■ You must press and hold the Stop/Reset button for five (5) seconds to save the change.</p>
6  	 <p>You can now go to parameter 275.</p>

Next: navigate to Parameter 275 and change the value

Do This	Result
1  until parameter displays 	 <p>The default value is -12.</p>
2  	 <p>You can now change the value.</p> <ul style="list-style-type: none"> ■ The UP arrow increases the value and raises the close limit position for the door. ■ The Down arrow decreases the value and lowers the close limit for the door. ■ Each press of an arrow changes the limit by a fraction of an inch, which gives you precise control of the value.
3  until new value displays 	
4  5 sec. 	 <p>The new value is saved. ■ You must press and hold the Stop/Reset button for five (5) seconds to save the change.</p>
5  5 sec. 	 <p>You return to run mode.</p>

How to finish testing the door and the safety features

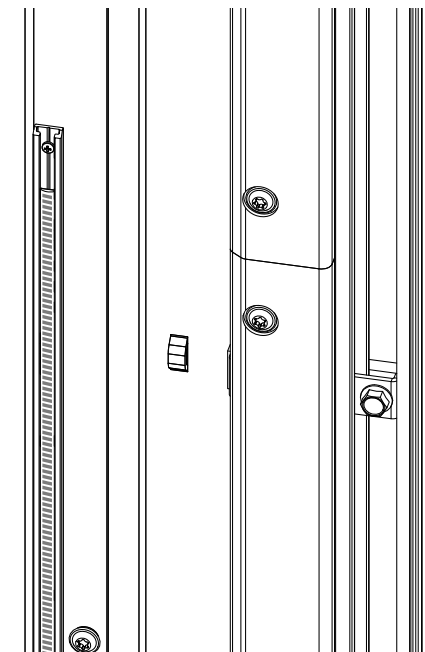
Navigate to Parameter 980 and set the value to 4 so the door will cycle continuously

Do This	Result
1  until parameter displays 	 <p>The default value is 0.</p>
2  	 <p>You can now change the value.</p>
3  4x 	
4  5 sec. 	 <p>The new value is saved. ■ You must press and hold the Stop/Reset button for five (5) seconds to save the change.</p>
5  5 sec. 	 <p>You return to run mode.</p>
6  	 <p>press either arrow to start cycling</p>

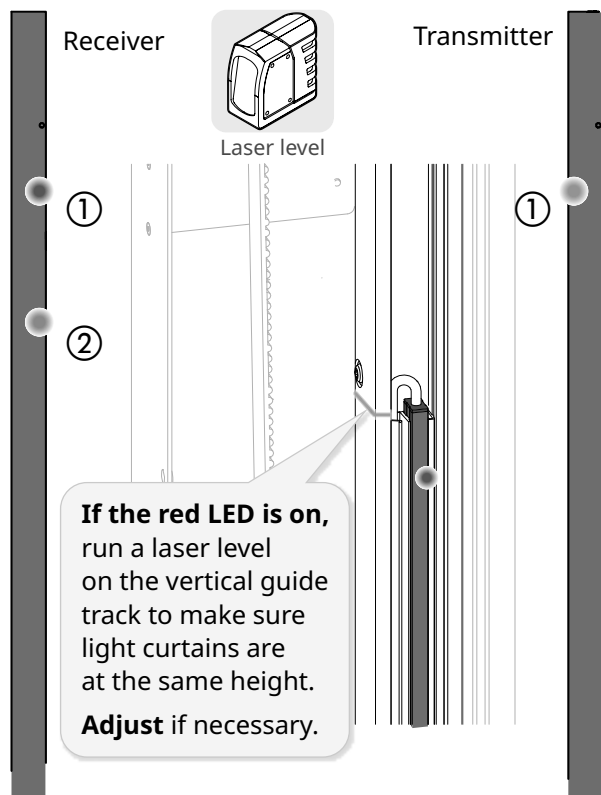
- 1** Watch the door as it cycles.
 - Make sure the door panel rises to the fully open position, remains in place for the standard time, then closes to the fully closed position.
 - Make sure the fully open and fully closed positions remain at the set limits.
 - Make sure the reversing edge is level when the door is fully closed.

- 2** While the door cycles, look and listen for:
 - Unusual noises such as grinding, whining or excessive motor noise
 - Excess movement by the motor, drive or drum.
 - Unexpected delay in activation or unusually long time period before automatically closing.

- 3** Make sure the Pathwatch LED strips operate correctly as the door opens and closes:
 - Continuous red light while the door closes.
 - Three-second sequence of yellow light before the door closes.
 - If the door also has a Pathwatch II warning light at the top of the door:
 - There is also a continuous red light while the door opens.
 - The three-second sequence before the door closes is red instead of yellow.



- 4** Make sure the blue and green LEDs ① are activated in both light curtains, and that the red LED in the receiver ② is **NOT** activated.

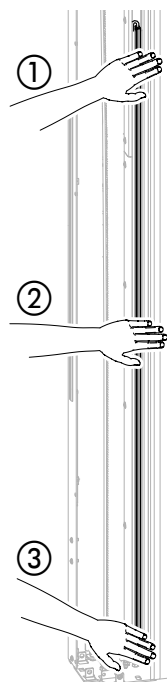


If the red light does not go off, or if you see a different combination of lights, call Rytec technical support at 800-628-1909 and request **Service Bulletin #274**.

- 5** Test the light curtain by placing your hand flat across the light curtain in the path of the door at the top ①, middle ② and bottom ③ of the light curtain while the door panel closes.

Make sure the door panel returns to the fully open position each time the light curtain is activated.

Make sure the door panel stops immediately when you place your hand at the top ① of the light curtain, and gradually when you place your hand in the middle ② or at the bottom ③.



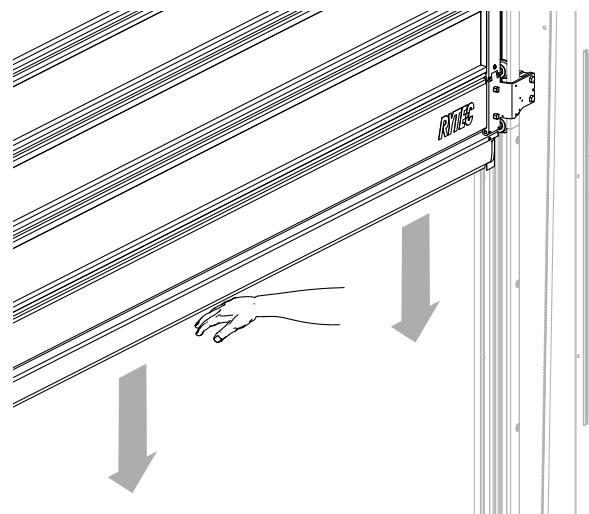
WARNING

Make sure you are standing clear of the door panel while performing this test.

- 6** Test the reversing edge by placing your arm in the path of the door while it is closing.

IMPORTANT Make sure you place your arm above the light curtains.

The door panel should stop, then reverse direction and rise to the fully open position.



- 7** Set the controller to parameter mode, set **Parameter 980 back to 0** to take the door out of continuous cycle and return to run mode.

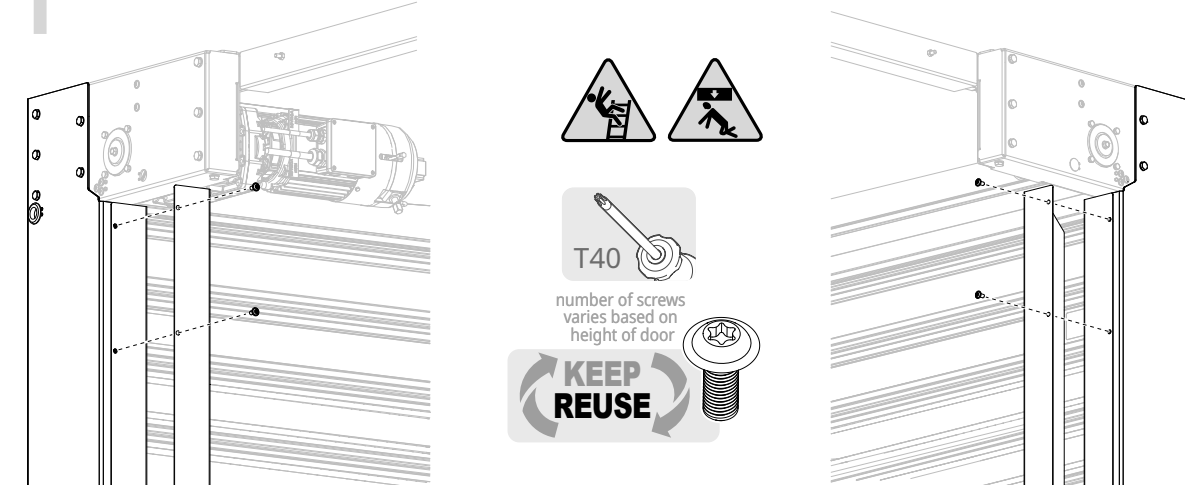
- 8** Activate the door using each activating system at least three times per system.

How to complete the installation



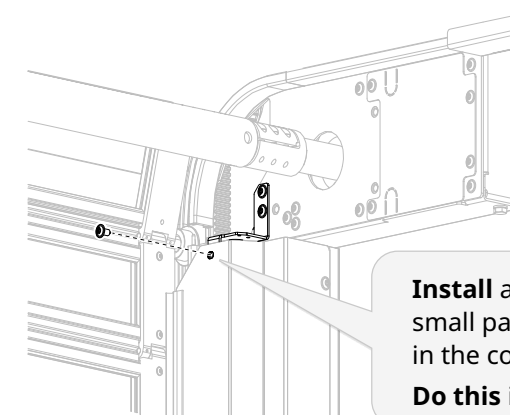
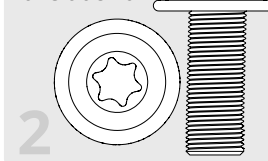
It is recommended that you **do not use power tools** for these steps. Overtorquing screws can damage the riveted nuts that secure them..

- 1** Reinstall both side column covers.



SMALL PARTS

01900820



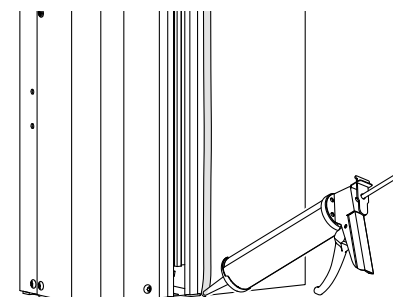
Install an additional screw from the small parts box into the screw hole in the corner bracket. Do this in both side columns.

- 2** If necessary, use the spray paint to correct blemishes in the door finish.

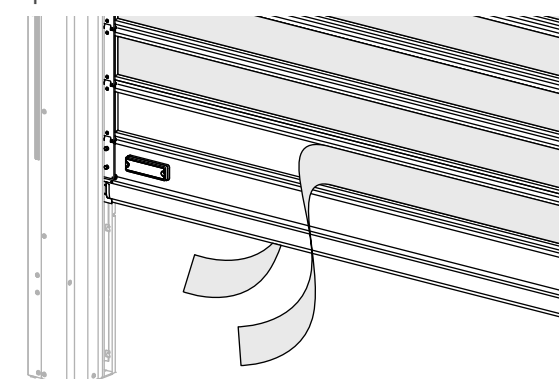
SMALL PARTS



- 3** Caulk between the door opening and the door.



- 4** Full vision SST doors: remove the protective plastic film from both sides of each door slat.



CAUTION

Film can release a static charge when removed.