

Service Bulletin 317 – Spiral® LP Inspection

Technical Support 800-628-1909 (toll-free)
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Summary	This Service Bulletin provides inspections to ensure proper installation and operation of a Spiral LP door.			
Products Affected	Spiral LP			
Keywords	spiral lp, inspection			
Tools and Equipment Required	T40 Torx Screwdriver 13mm Socket or Wrench 17mm Socket or Wrench Laser Level Measuring Tape Spirit Level Carpenter's Square Dead Blow Mallet Scrap Wood Ladder Appropriate PPE			
Parts and Materials Required	N/A			
Related Media	N/A			
	Issue Date	September 2025	Status	Active

	WARNING			
	Read and understand the entire service bulletin before proceeding. When instructed to do so, follow lockout/tagout procedures before servicing the door.			

Overview

Periodic inspection that a Spiral LP door has been properly **plumbed, leveled and squared**, that the **open and close limits** have been set correctly, and that the **secondary drive belts** are properly aligned and tensioned, will prevent damage to the door and costly service calls.

The inspection should answer these questions (**check off as completed**):

- ☐ Does the **distance between the side columns** match the production width for the door?
(Page 3)
- ☐ Is the door **plumb, level and square**? (Page 4)
- ☐ Are the consoles **squared**? (Page 7)
- ☐ Is the **door panel** plumb and level? (Page 7)
- ☐ Are the **vertical door tracks** in both side columns plumb? (Page 11)
- ☐ Are the **open limit and close limit** correct? (Page 14)
- ☐ Do the **secondary drive belts** remain clear of the flanges on the baseplate pulley assembly as the door goes up and down? (Page 19)
- ☐ Are the belts **properly tensioned**? (Page 20)

Safety Information And the Meaning Of Signal Words

Technical content produced by Rytec includes safety information which must be read, understood, and followed 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.

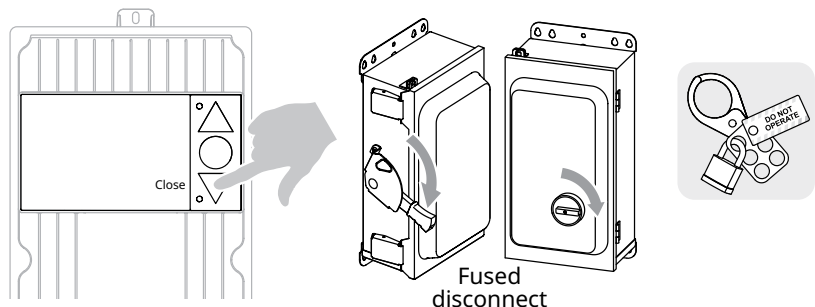
Each safety alert includes at least three components. The safety alert symbol may be general alert symbol or an alert symbol specific to the hazard. The safety signal word indicates the likelihood and potential severity of injury due to the hazard. The safety information contains information about the hazard and how to safely mitigate it.

The following severities may exist for working with this service bulletin:

	DANGER
	Danger indicates a hazardous situation which, if not avoided, will cause death or serious injury.
	WARNING
	Warning indicates a hazardous situation which, if not avoided, can cause death or serious injury.
	CAUTION
	Caution indicates a hazardous situation which, if not avoided, can cause minor or moderate injury.

Before you begin

- Set** the door to the fully closed position, then **shut off power to the door** and perform a lockout/tagout.

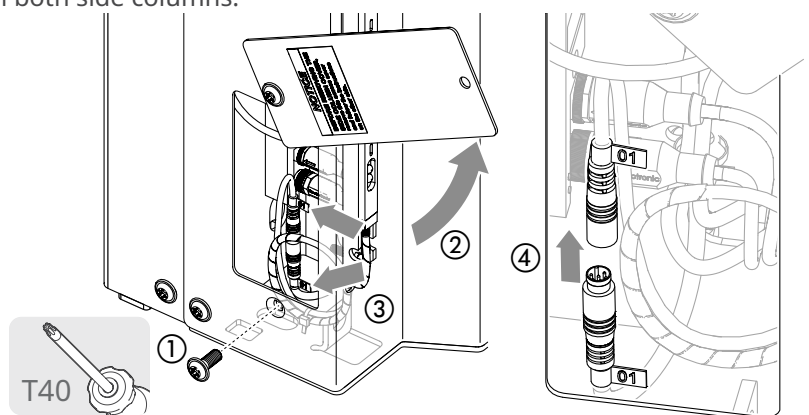


- Remove** the side column covers on both side columns.

On doors **with the SmartSurround system**, there is a small, labeled cover panel at the base of each side column.

Loosen and remove the bolt at the bottom of the panel ① and swing the panel open ②.

The CAN bus cables to the cover-mounted SmartSurround unit, labeled "01" ③, must be disconnected before the side column cover can be removed ④.



How to check the distance between the side columns

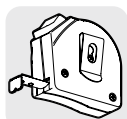
1 Find the **production width** for the door.

There are two ways to do this:

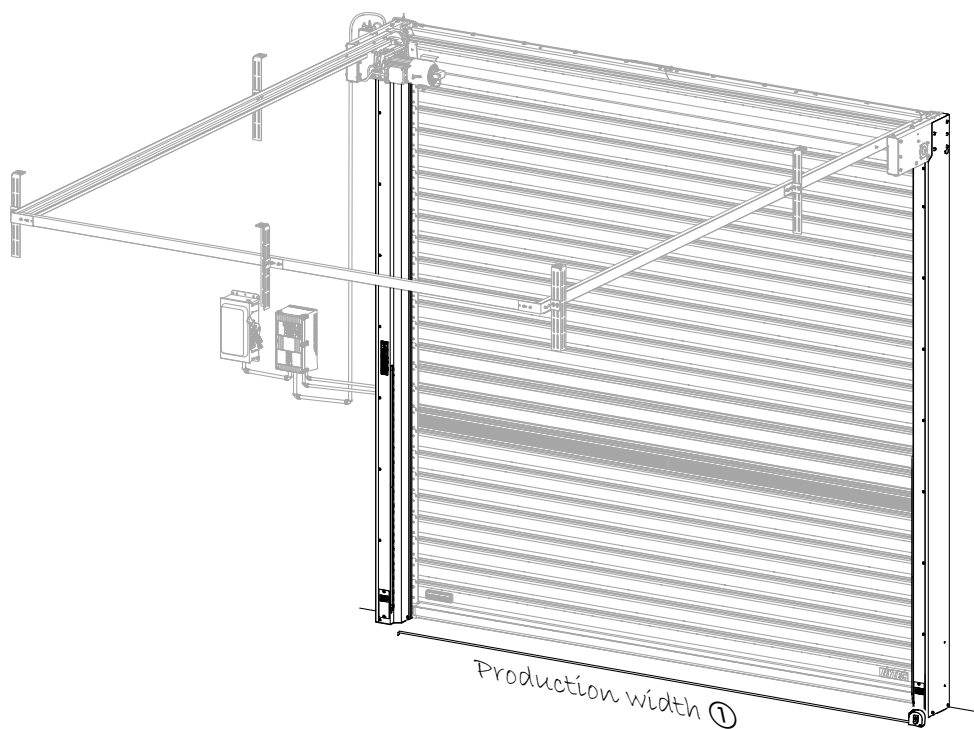
- Locate the door width ① on the **object list** for the door.
- Contact Rytec technical support at **800-628-1909**.

Object list		Material number	
Duplicate		716	
Material description		Order number	Order quantity
SPIRAL STN-S		20076896	1 EA
WIP# controller	Production scheduler	Order type	Start
500 B5 ZMAT	T6 Tier 6	ZP02 RYTEC MTO Order	11/04/2019
Status	REL MSPT PRT PRC SETC	Plant	Creation Date
		2000 Rytec Corporation -	0002596972 10/22/2019
Serial number			
D0099760-010			
Configuration			
DOOR MODEL NAME Spiral Low Headroom FV "S" ①			
Door Width (Inches) 216.142			
Door Height (Inches) 101.969			
Production Width in mm 5,490			
Production Height in mm 2,590			
Door head sizeA			
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 springs 0			

2 **Measure** the distance between the inside edges of the side columns



Measuring tape



If the measurements don't match:

Contact Rytec technical support at **800-628-1909**.

How to check that the door is plumb, level and square

1 First, check that the **floor is level**.

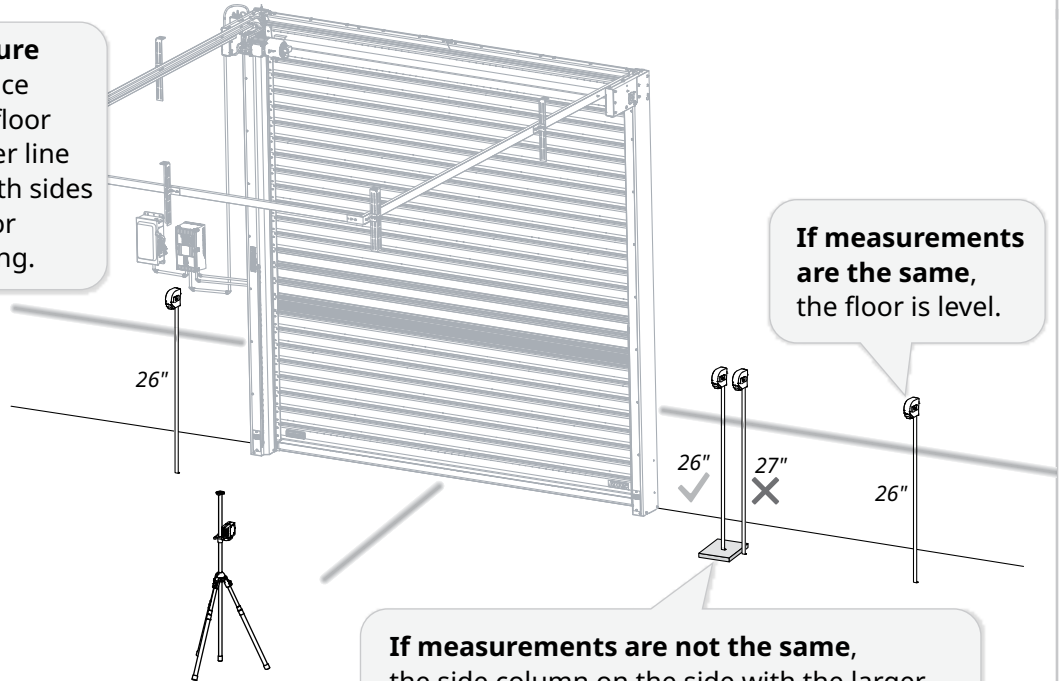


Laser level



Measuring tape

Measure distance from floor to laser line on both sides of door opening.



If measurements are the same, the floor is level.

If measurements are not the same, the side column on the side with the larger number should have been shimmed so that the baseplates are level.

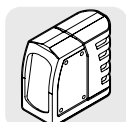
2 **IMPORTANT**

Spiral LPs have an available **optional reversing edge with an extended flap** that can be trimmed to match the contour of an uneven floor and create a seal across the door opening.

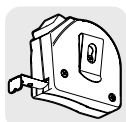
If the floor is not level, **do NOT skip teeth** or **manipulate** the door panels to compensate for the uneven surface. Doing so can cause improper operation and will **void the warranty**. Instead, the optional extended flap **must** be installed to ensure proper sealing and safe operation.

Contact Rytec technical support if the door you are servicing needs this optional feature

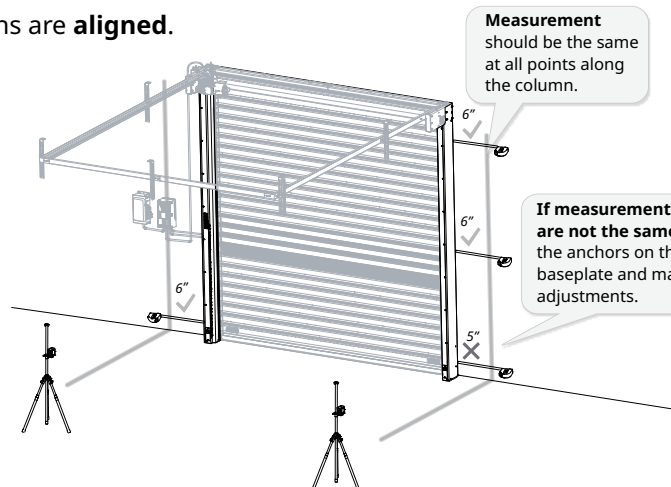
3 Check that both side columns are **aligned**.



Laser level



Measuring tape



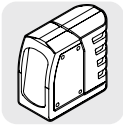
Measurement should be the same at all points along the column.

If measurements are not the same, loosen the anchors on the baseplate and make adjustments.

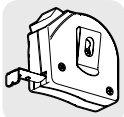
4

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

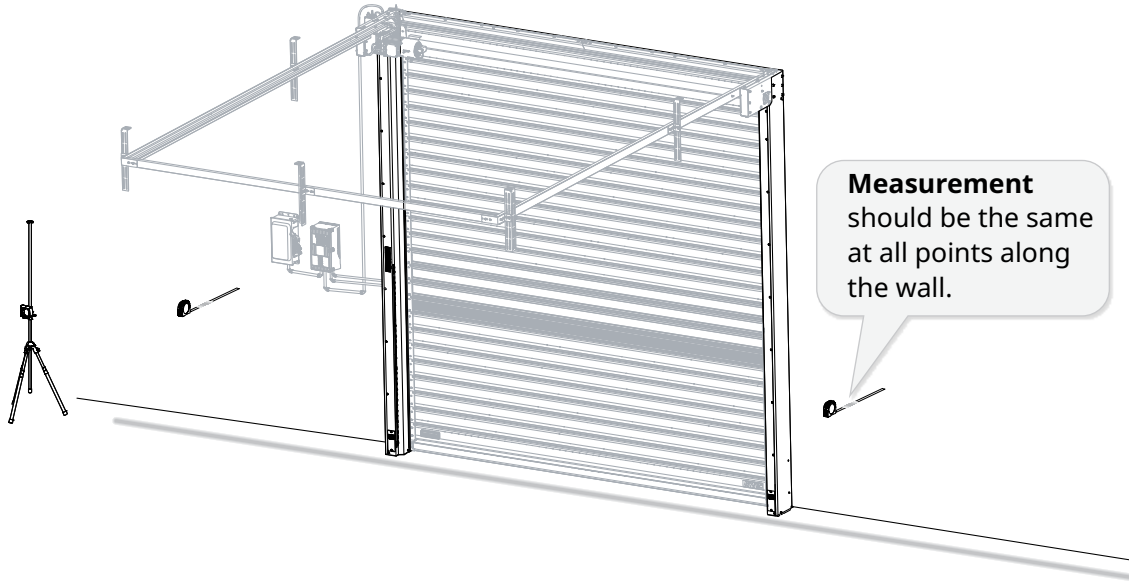
Make sure the line is parallel to the wall by measuring it at multiple points along the wall.



Laser level

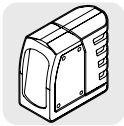


Measuring tape



5

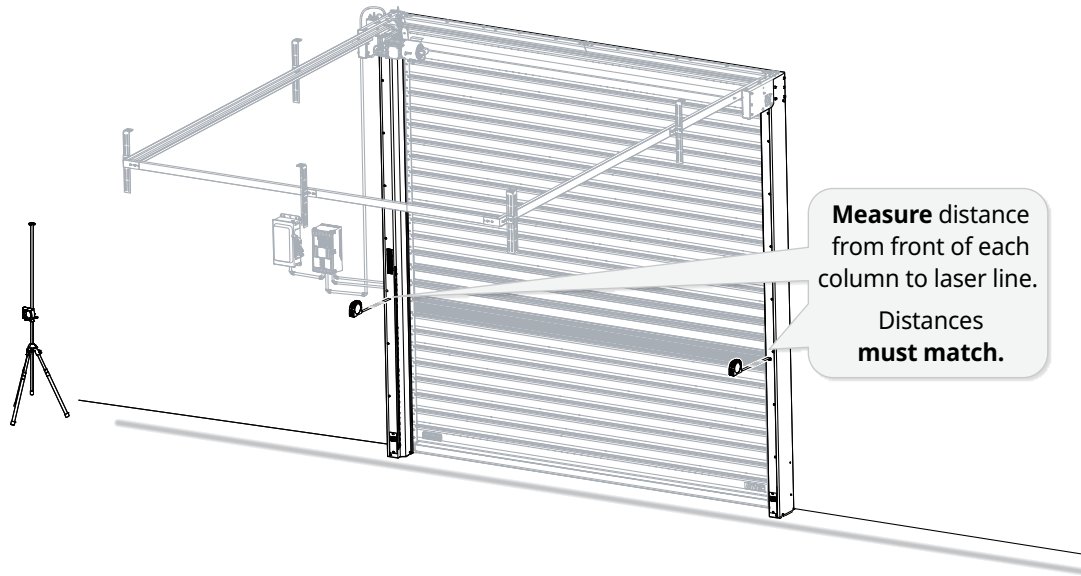
Plumb the side columns to each other.



Laser level



Measuring tape



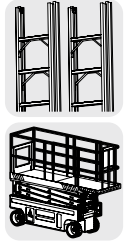
⚠ WARNING



FALLING HAZARD

- **The next step** must be done in the head assembly.
- **Make sure ladders and scissor lifts** have the correct load rating and are of sufficient height to safely access the door head assembly.
- **Make sure any service tech** who access the head assembly has been properly trained.
- **Follow all** safety instructions.

FAILURE TO COMPLY COULD RESULT IN DEATH OR SERIOUS INJURY

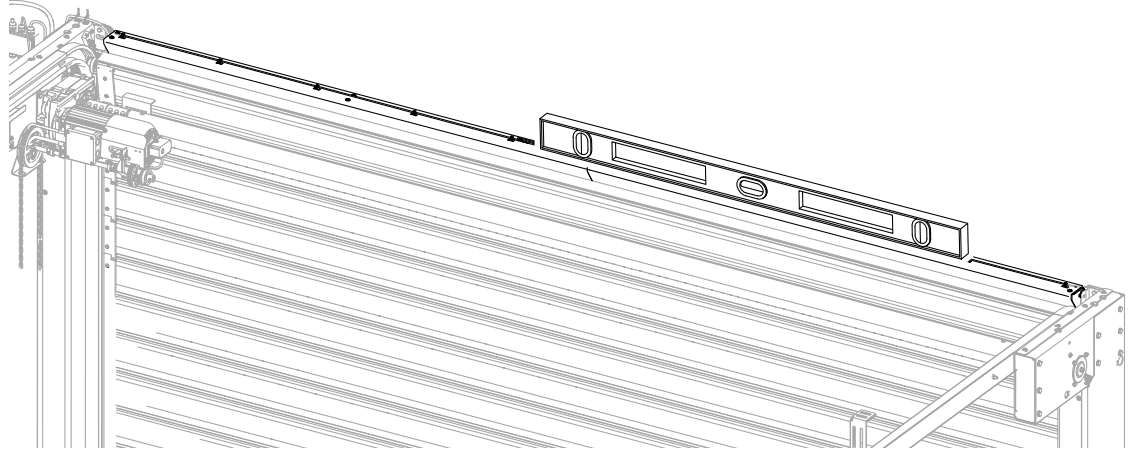


6

At the top of the head assembly, **make sure** the rear seal is level.



Spirit level



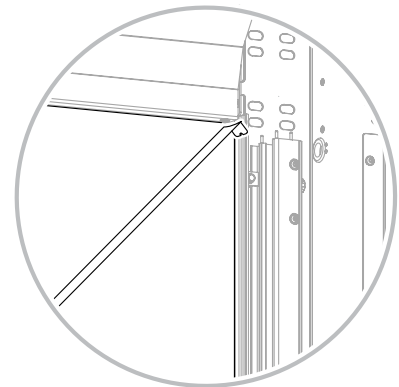
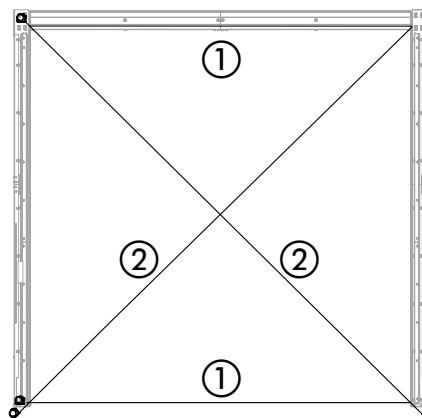
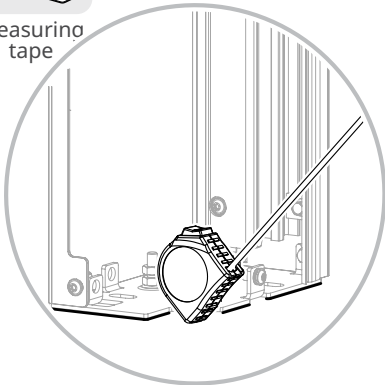
7

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.



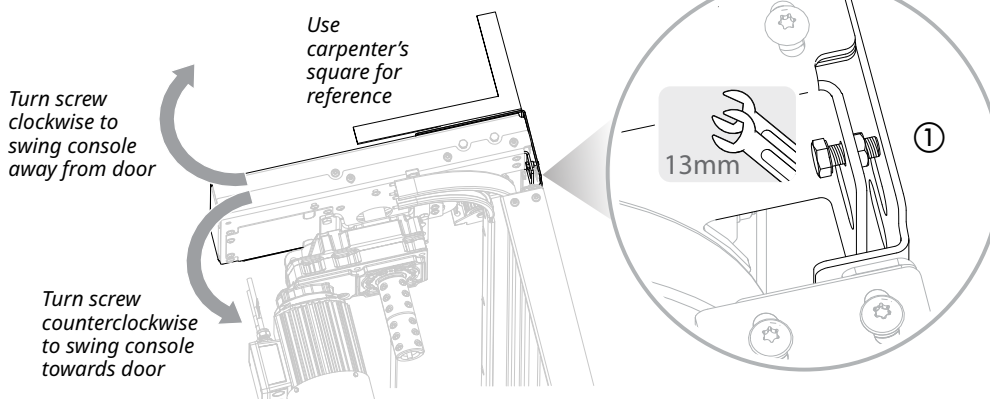
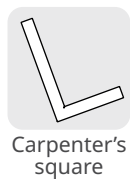
Measuring tape



If the door is not plumb, level and square:
Contact Rytec technical support at **800-628-1909**.

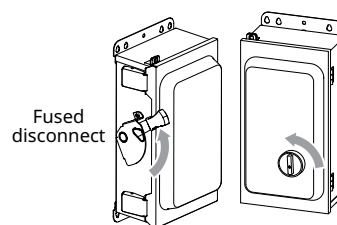
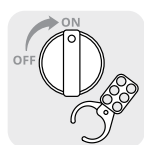
How to check that the consoles are squared

- 1 **Use** a carpenter's square to check that each console is squared.
If necessary, **turn** the rear hex adjustment screw ① to change the angle.

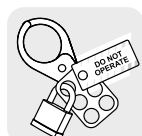
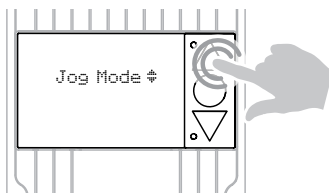
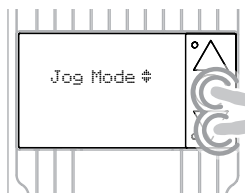


How to check that the door panel is plumb and level

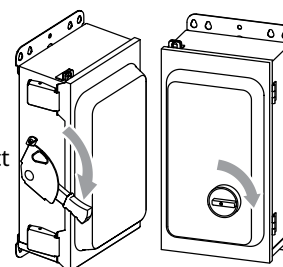
- 1 **Remove** the lockout/tagout and **restore** power to the door.



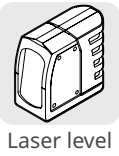
- 2 **Jog** the door to a comfortable working height, then **shut off power to the door** and perform a lockout/tagout.



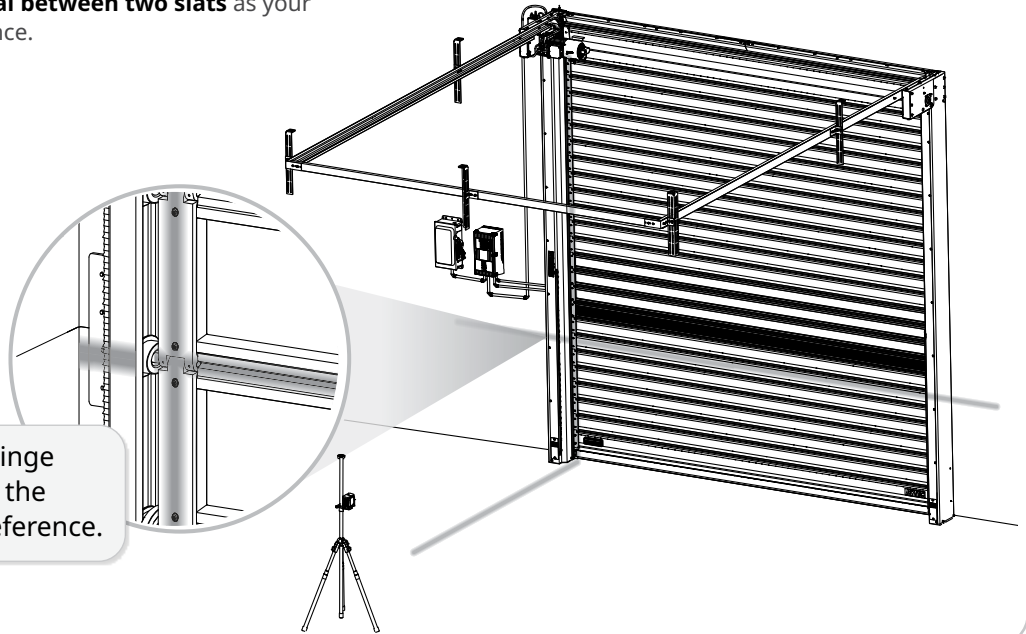
Fused disconnect



- 3** Use a laser level to check that the door is plumb and level.
- Use the **bolts on the hinge chain** for your vertical reference.
 - Use the **hinge seal between two slats** as your horizontal reference.



Use the hinge screws as the vertical reference.



If the door is not plumb:

Contact Rytec technical support at **800-628-1909**.

If the door is not level:

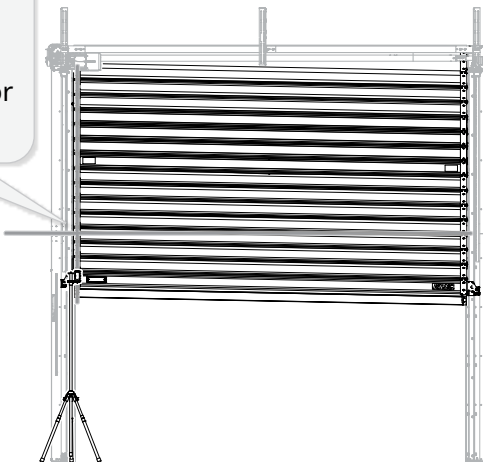
	⚠ WARNING Do not perform this procedure until the power disconnect is in the OFF position and a lockout/tagout is complete. Contact with high-voltage wires, or the door being activated unexpectedly, can cause death or serious injury.	
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1



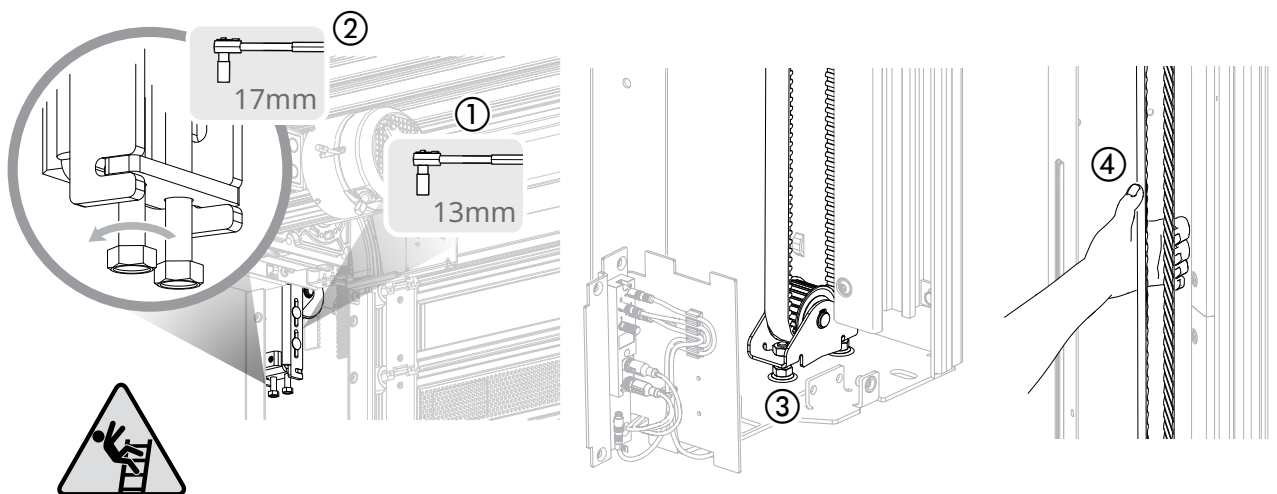
IMPORTANT

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.
- 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.

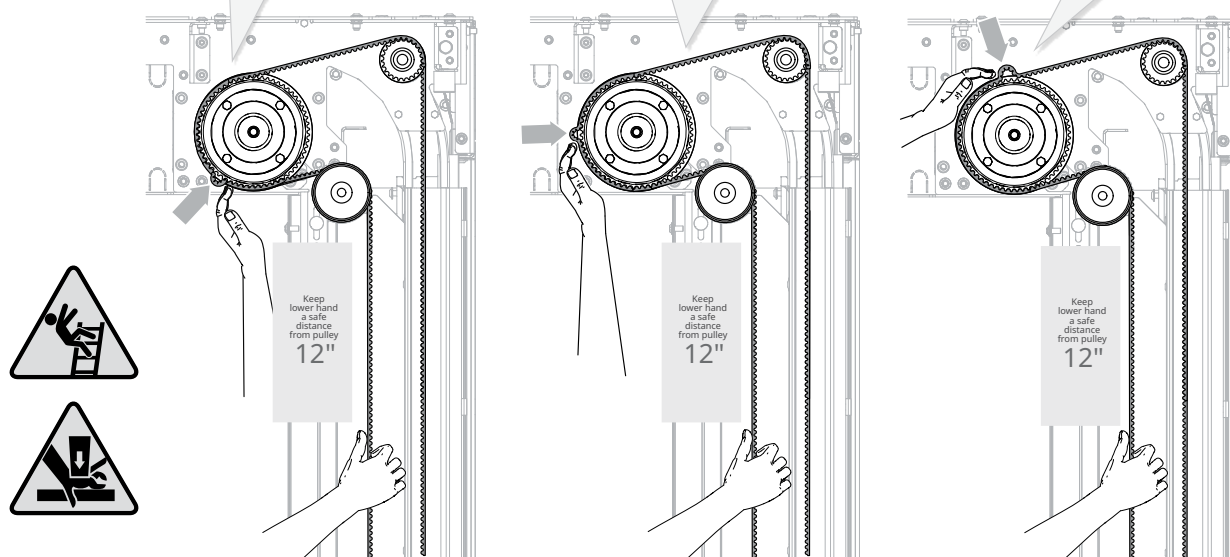
IMPORTANT

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

Push slack to create a “wave” in the belt and hold it against the pulley.

Press down on belt until teeth drop into the next notch on pulley.

Push “wave” around pulley and down the other side.



4



Laser level

Level the door panel again.

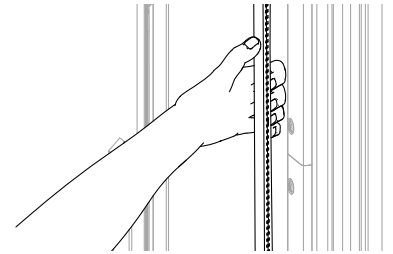
If the door panel is not level, repeat these steps and retest.

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

5

Reset the tension on the belt as described in *"How to adjust the tension on a secondary drive belt" on page 21.*

- **Tension is correct** when it requires considerable effort to bring the two legs of the belt, near the midpoint, together until they touch.

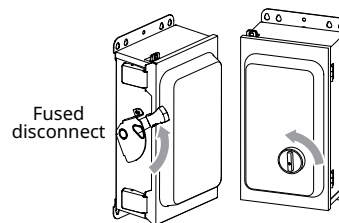
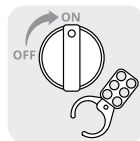


6

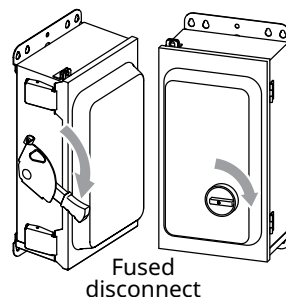
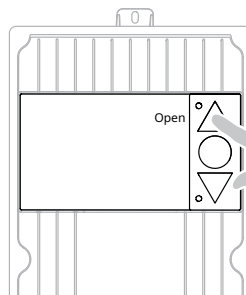
Re-tighten the baseplate pulley assembly and **reinstall** the CAN bracket.

How to check that the vertical door tracks are plumb

- 1 Remove the lockout/tagout and **restore** power to the door.



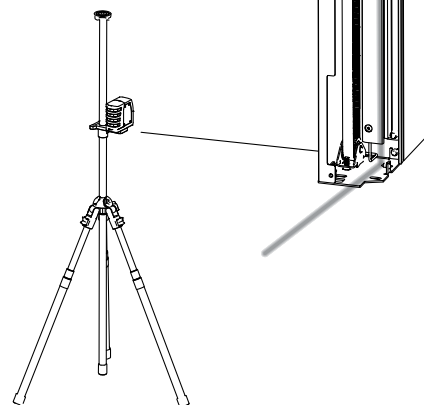
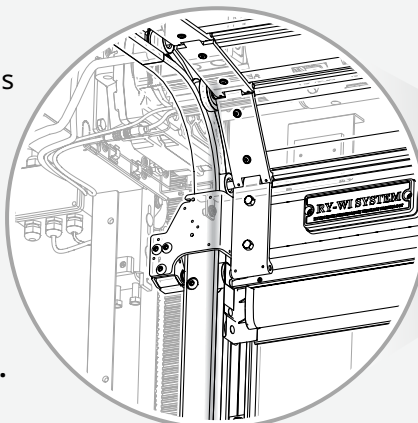
- 2 Set the door to the fully open position, then **shut off power to the door** and perform a lockout/tagout.



- 3 Use a laser level to check that the vertical door tracks in each side column are plumb.

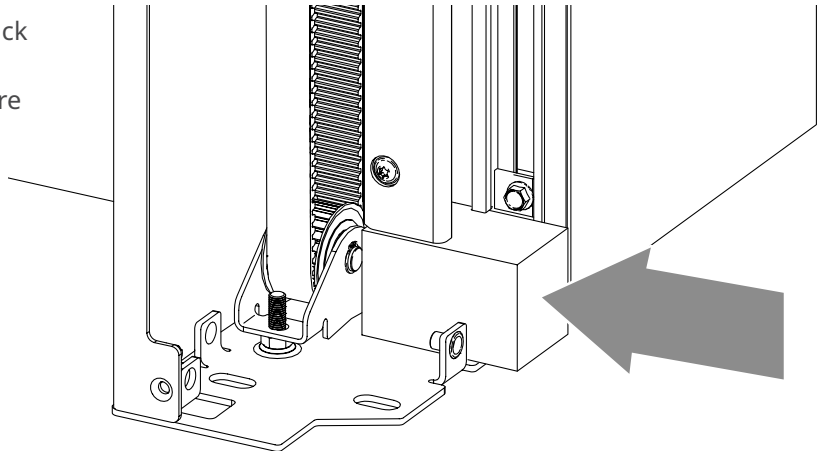
The **top** of the track is secured to the radial track at the console, so it is the **vertical reference**.

Any adjustments to the track position will be made at the **bottom of the track**.

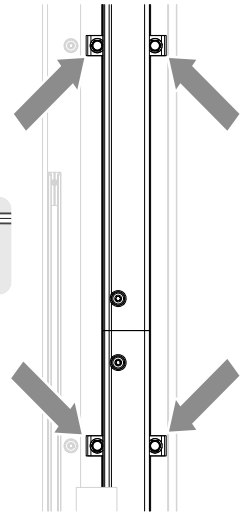
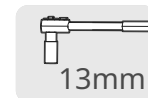


If either vertical door track is not plumb:

- 1** **Place** a wood block under the track so it does not drop down when the vertical guide track holders are loosened.

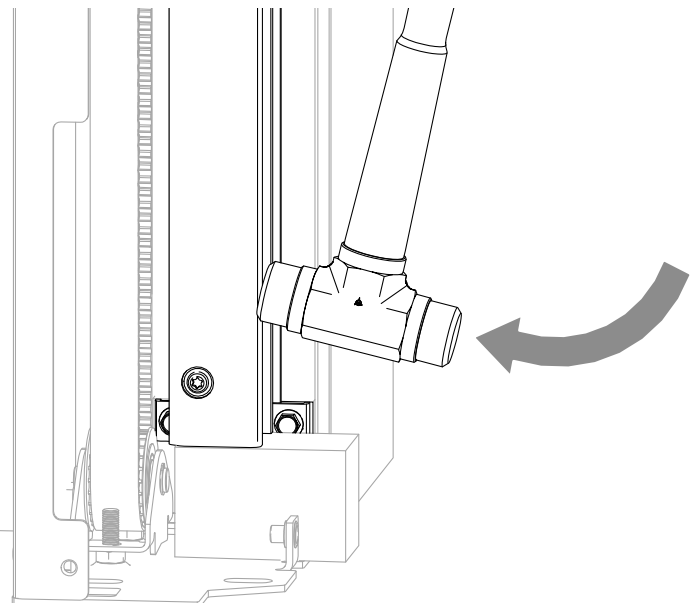
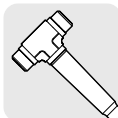


- 2** **Loosen the bolts** on all of the vertical guide track holders. **Make sure** that all of the holders are loose enough to allow the track to move freely. **DO NOT loosen** beyond this point. **DO NOT remove** any of the holders.



- 3** **Use** your hands, or taps with a soft-sided or dead blow mallet, to **adjust** the position of the track the track **FROM THE BOTTOM** until it is plumb.

Dead blow mallet



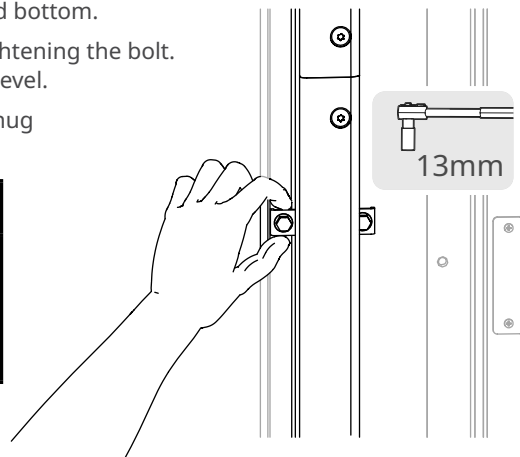
4 When the vertical door track is plumb, **tighten** the bolts on the track holders.

- 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.

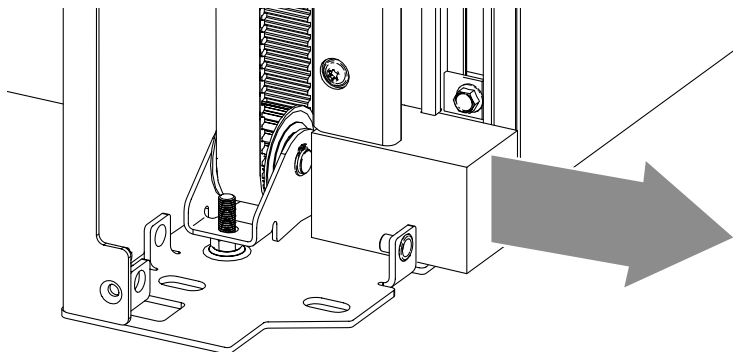


CAUTION

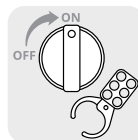
Make sure your fingers are clear of the bolt when tightening. Power tools are not recommended.



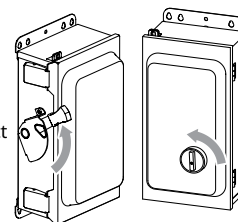
5 **Remove** the wood block when you are done.



6 **Remove** the lockout/tagout and **restore** power to the door.



Fused disconnect



How to set limits



CAUTION

Failure to follow these steps exactly as outlined may result in catastrophic failure, causing severe equipment damage, system downtime, and potential safety hazards.



WARNING

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.

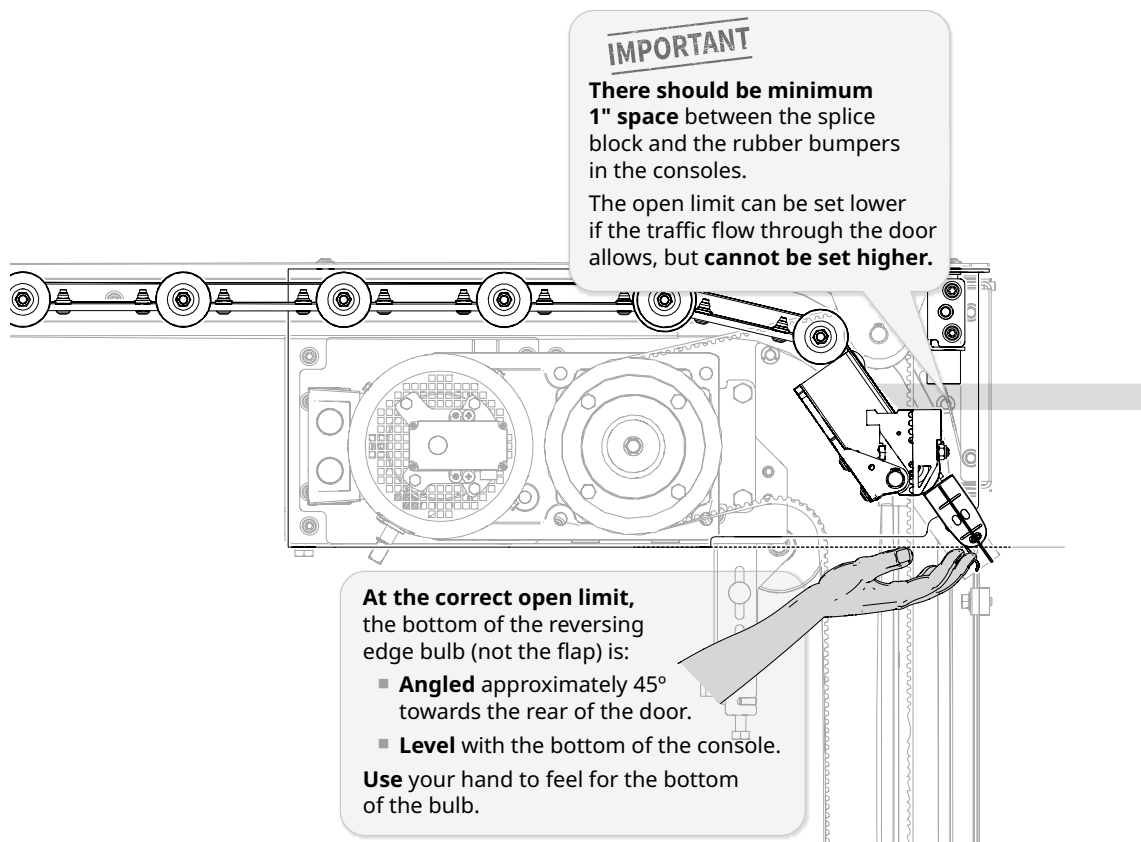
Before you begin: Identify the correct open and close limits for a Spiral LP

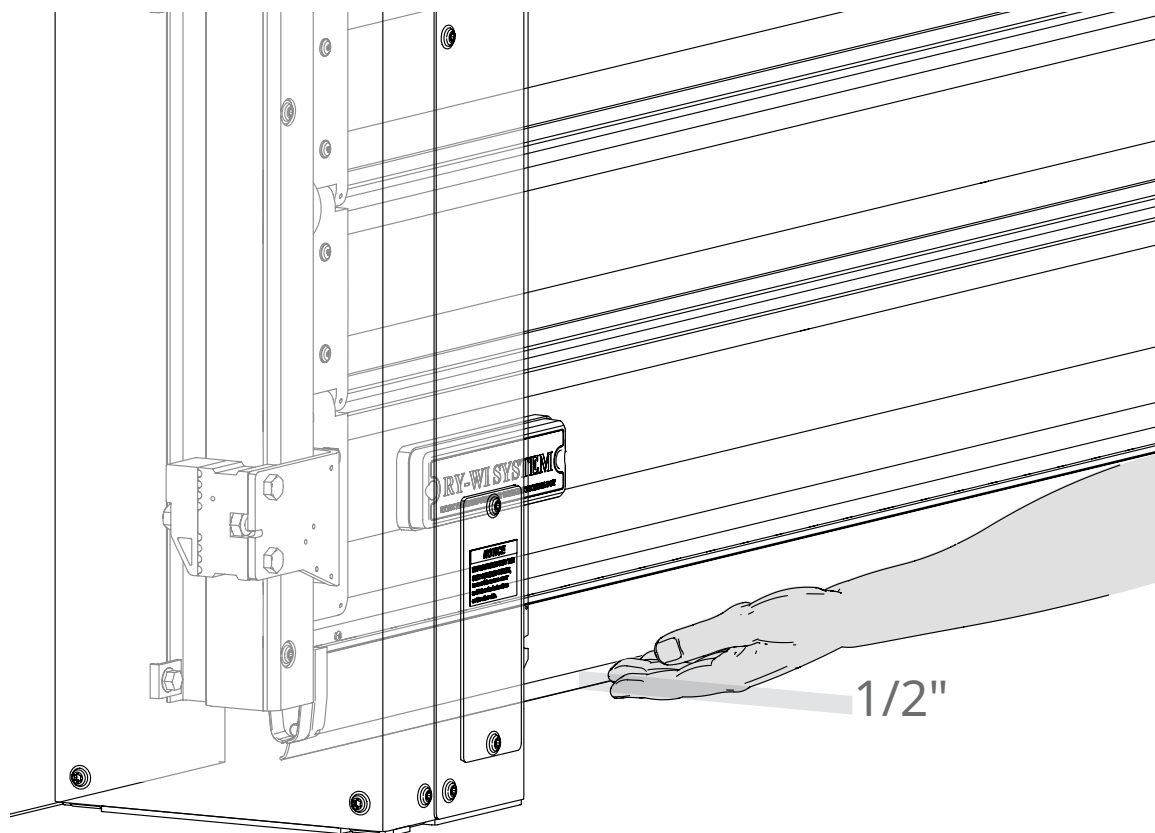
IMPORTANT

Do **not** use the **lintel** to set the door height, as the lintel may not be accurate. The **maximum upper limit** must be set so that the **bottom of the reversing edge bulb** is **flush with the bottom of the console**, as shown in the illustration below.

Setting the limit higher than this can cause improper operation and potential damage to the door.

Contact Rytec technical support if the door you are servicing needs this optional feature





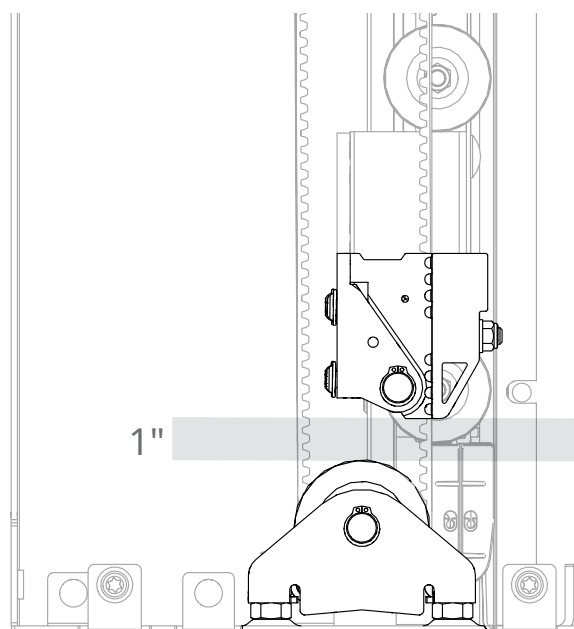
The door is at the correct **close limit** when there is a **1" clearance** between the splice blocks and the baseplate pulley assemblies.

The bottom of the reversing edge should be **1/2" (roughly the width of a finger) off the floor** and the flap on the bottom dimples to create a seal.

The reversing edge should **NOT** touch the floor.

For sites with **uneven floors**, the Spiral LP offers an optional extender to the reversing edge which can be trimmed to match the floor and form a seal.

Contact Rytec technical support if the door you are servicing needs this optional feature.



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

Do This	Result
1	The door starts in run mode.
2	until the parameter screen displays You are in Parameter mode. Go to parameter 999.
3	2X to reach parameter P:999 The Password parameter P:999 screen displays.
4	1X to move cursor to the right (edit value) You can now change the value of parameter P:999.
5	16X to set value to hexadecimal 10 Set the value to 10 (Service level password).
6	until question mark changes to checkmark (value saved) The Service level password is saved.

Next: navigate to parameter P:210, set the value to 5, then exit the parameter to start the limits sequence

Do This	Result
1	until 210 displays The Limits parameter (210) screen displays.
2	The cursor moves to the right side.
3	5x Set the New Limits value to 5. This setting allows you to edit both the closed position limit and the open position limit.
4	5 sec. The New Limits value is saved. You must press and hold the Reset button for five (5) seconds to save edits that you make to a parameter.
5	The cursor moves to the left side.

Do This
Result

6  5 sec.  

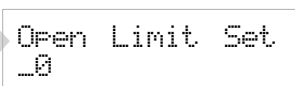
The sequence to set the closed and open position limits begins.

7  1X to start sequence  

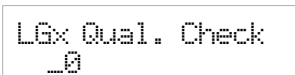
Scrolling message:
Hold Reset button if position OK

8 **Set the open position.**
until open height is correct   

Reference previous page for correct open limit.

9  until "Open Limit Set" screen displays  

when quality check is complete, you see these screens:





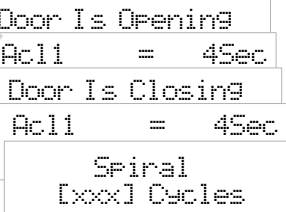
Scrolling message:
Press Close button to begin

Do This
Result

10  1X to start. The door panel closes.  

the door panel stops when it reaches the bottom of the light curtain, then you see:



11  1X to start auto-calibration  

- The door opens and closes automatically **up to 12 times.**
- The controller automatically sets the close limit position while the door calibrates.
- When calibration is complete, the door switches to Run mode.

IMPORTANT

The door may not open or close completely during automatic calibration. This is normal.

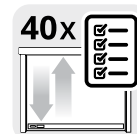
When calibration is complete, the door will open and close correctly.

- You can manually adjust the close limit after calibration is complete by changing parameter P:275.

See next page.

12 **Follow the steps** in *How to put the door into test mode* starting on page 16 and **check** for these conditions while the door opens and closes:

- Door panel moves smoothly
- Door is not unusually noisy
- Bracket stays tight to motor and head assembly
- Drive shaft does not shake
- Door limits are correct



How to manually reset the close limit (optional)

IMPORTANT This procedure is for making small adjustments (up to one inch) to the close limit. Reset limits using parameter P:210 for larger adjustments.

Navigate to Parameter 275 and change the value

Do This	Result
1  until parameter displays   The default value is -12	  P: Incremental S 275= -12 Inc FOR L2-000001
2  1X to move cursor to the right (edit value)   You can now change the value. ▪ 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.	  P: Incremental S 275= -12.1 Inc FOR L2-000002
3  until new value displays   IMPORTANT Do not change the value by more than 10 increments. Then test the door.	  P: Incremental S 275= [x]1? Inc FOR L2-000003
4  until question mark changes to checkmark (value saved)   The new value is saved.	  P: Incremental S 275= [x]1.1 Inc FOR L2-000004
5  1X to move cursor to left (parameters)   You can now return to run mode.	  P: Incremental S 275= [x]1.1 Inc FOR L2-000005

How to check the alignment of the secondary drive belts at the baseplate assembly

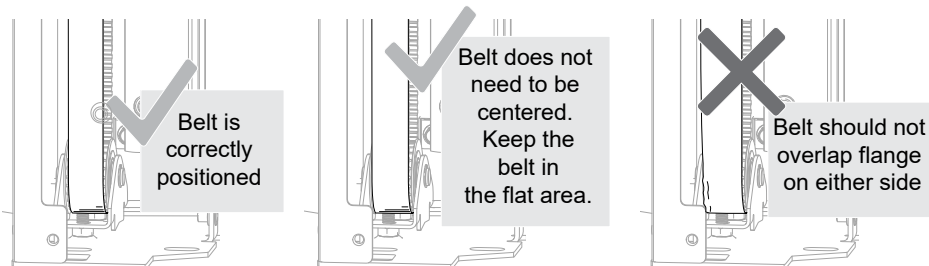
IMPORTANT Connect the SmartSurround light curtains before setting parameter 980-7.

First, navigate to parameter P:980 and set the value to 4 so the door will cycle continuously.

- For doors with SmartSurround and CAN bus wiring, **set the value to 7.**

Do This	Result
1  until parameter displays  The default value is 0.	P: Operat. Mode S 980= 0 #
2  1X to move cursor to the right (edit value)  You can now change the value.	P: Operat. Mode S 980= 0v#
3  4X to change the value to 4 	P: Operat. Mode S 980= 4?#
4  until question mark changes to checkmark (value saved)  The new value is saved.	P: Operat. Mode S 980= 4v#
5  until door returns to run mode 	Spiral [xxx] Cycles
6  press either arrow to start cycling 	Act 1 5 Sec

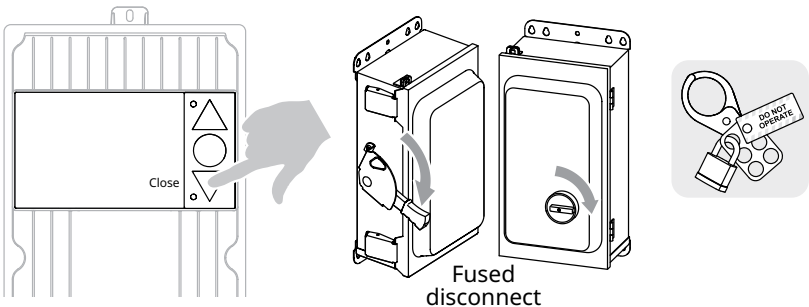
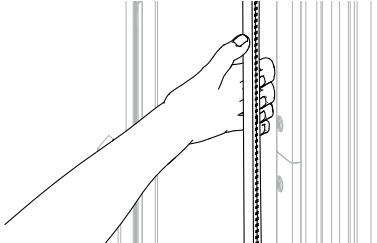
- 7 Observe** the secondary drive belts in both columns
- Make sure** the belts do not cross over the flanged part of the baseplate pulley assembly as the door moves up and down.



If either belt is aligned so it crosses over a flange:

Contact Rytec technical support at 800-628-1909.

How to check the tension of the secondary drive belts

Do This	Result
1 Reset parameter P:980 to zero, then return to Run mode. until parameter displays 	
2 Set the door to the fully closed position, then shut off power to the door and perform a lockout/tagout.	 Fused disconnect
3 Press the front and rear legs of the belt together. Tension is correct when it requires considerable effort to bring the two legs of the belt, near the midpoint, together until they touch.	

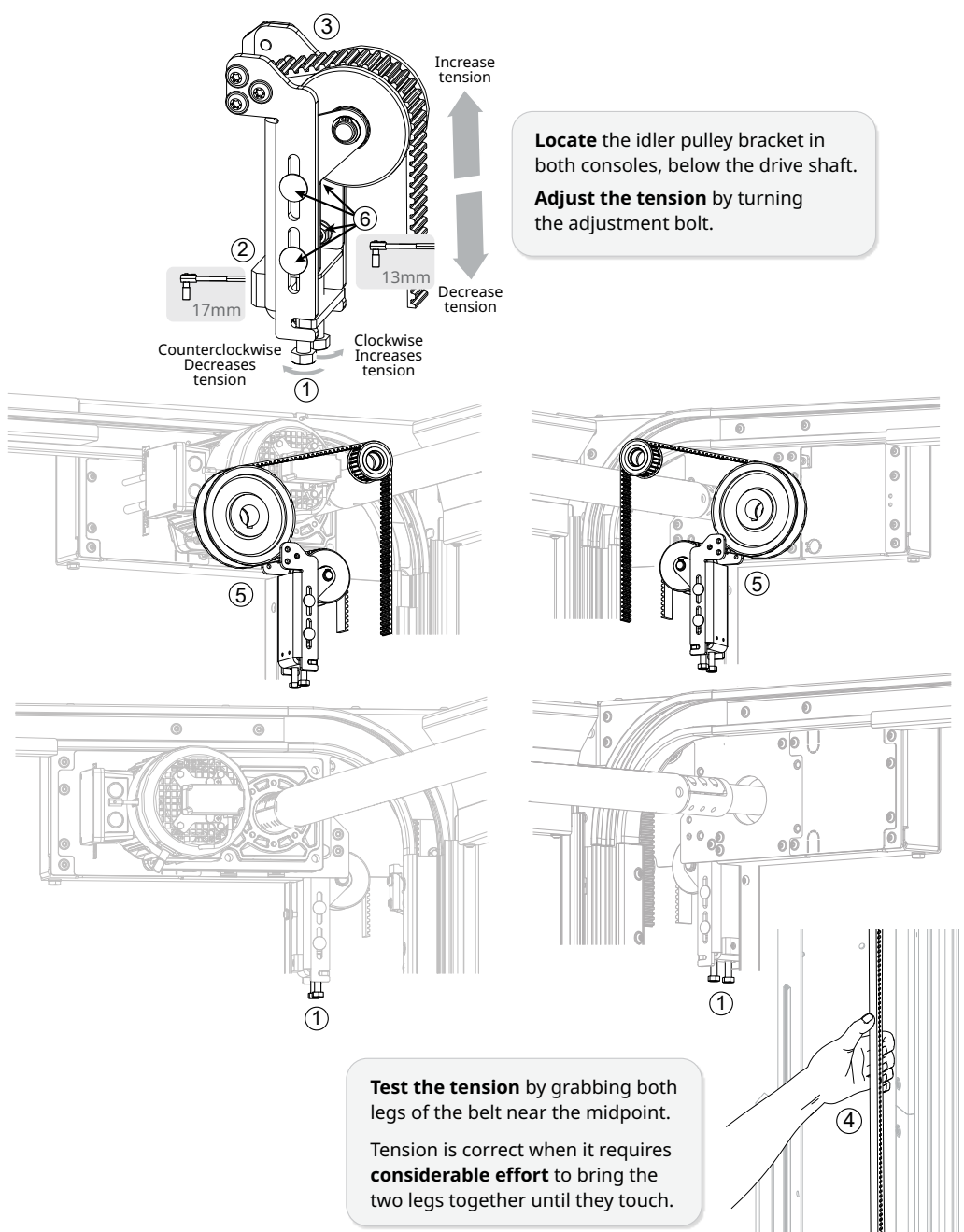
If the tension is not correct:

How to adjust the tension on a secondary drive 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 four nuts and bolts ⑥ that secure the bracket so that it moves easily when the adjustment screw ① is turned. **Tighten** them when tension is set.

If the proper tension cannot be set, remove a tooth from the belt. Questions:

Contact Rytec technical support at 800-628-1909.



Wrapping up

1

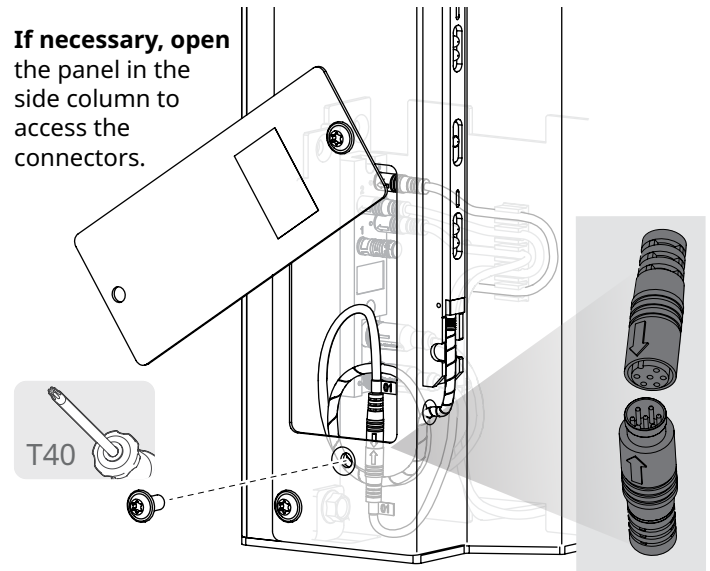
Reinstall the side column covers.

- **Use one screw** each to hold them in place; it may be necessary to open them to make adjustments during testing.
- **Do not secure them fully** until all testing is complete.

Reconnect the two cables labeled "01".

- **Line up** the embossed arrows on the connectors to align the guide notch and contacts correctly.
- **The connectors** will only fully connect if they are aligned correctly.

If necessary, open the panel in the side column to access the connectors.



2

If you removed the side column covers and separated the CAN bus cables before shutting off power to the door, **you MUST do a soft reboot of the controller** to re-sync the CAN bus system when all cables have been reconnected.

- **Press and hold** all three buttons until the display goes blank.
- **Release the buttons.** You see `Self-Check` or the system software versions number.



until the display goes blank

```
RYTEC
TST FU3R-RV U02-
RYTEC
Self Check
```