

SERVICE BULLETIN #284

How to install the springs in a Spiral door

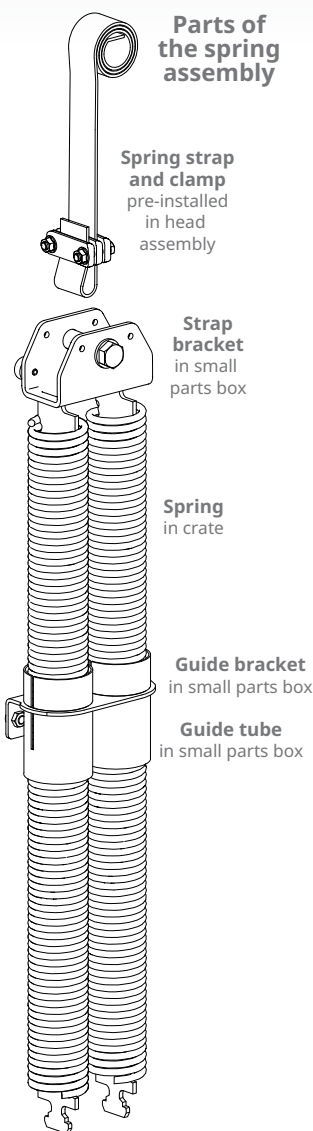
- 1** **Make sure** the total number of springs in the crate matches the number listed in the object list ①.
- Make sure** the pre-installed spring straps on both sides of the head assembly match the table on the next page ③ for the total number of springs.



Object list		Material number	
Original		724	
Material description		Order number	Order quantity
SPIRAL STT-L		20000597	1 EA
MRP Controller	Production scheduler	Order type	Start
500	T7	ZP02	06/03/2019
B5 ZMAT	Tier 7	RYTEC MTO Order	06/05/2019
Status		Plant	Reservation number
REL MSPT PRT PRC SETC		2000	0002425475
Serial number		Creation Date	
D0091893-010		05/31/2019	
Configuration			
DOOR MODEL NAME Spiral Full Vision "L"			
Door Width (Inches) 144.094			
Door Height (Inches) 128.346			
Production Width in mm 3,660			
Production Height in mm 3,260			
Door head sizeB			
Line Voltage 460V			
Motor mount side Right 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 4 ①			
Spring Tension (in) 4.724			
LH Inner Spring Pack Qty 0			
LH Outer Spring Pack Qty 2 ②			
RH Outer Spring Pack Qty 2			
RH Inner Spring Pack Qty 0			
Spring Tension in mm 120			
Number of pre-wraps 2,250			

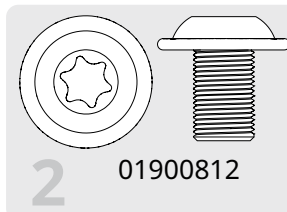
Locate the parts for the spring assemblies in both side columns:

- Each door has a **total of one to twelve springs**, based on the size of the door.
- The springs are divided between the two side columns.
- The springs are installed in **assemblies**:
 - 1-3 springs
 - guide tubes
 - a guide bracket
 - a strap bracket.
- When there are more than 3 springs in a side column, **two assemblies** are installed side by side and bolted together.
- The table on the next page** shows how to divide the springs and put together the assemblies.



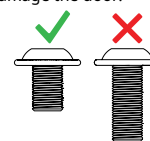
Hardware (in small parts box)

Hardware to attach outer guide brackets to side column wall

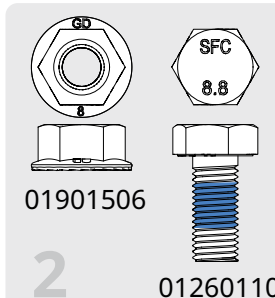


IMPORTANT

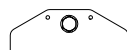
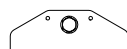
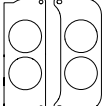
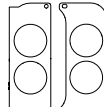
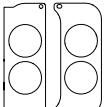
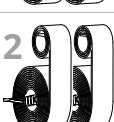
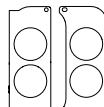
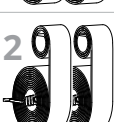
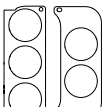
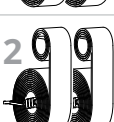
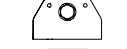
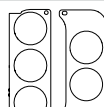
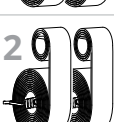
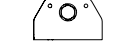
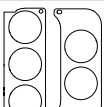
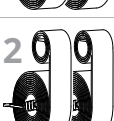
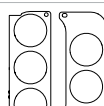
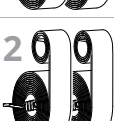
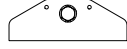
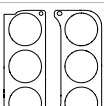
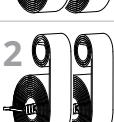
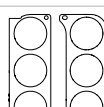
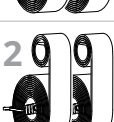
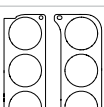
Match 01900812 screws to this illustration to make sure length is correct. Other screws used in the Spiral have the same head style, but are too long for the guide bracket nut and will damage the door.



Hardware to attach inner guide bracket to outer guide bracket



2 Match the springs, assembly parts and hardware for your door to this table.

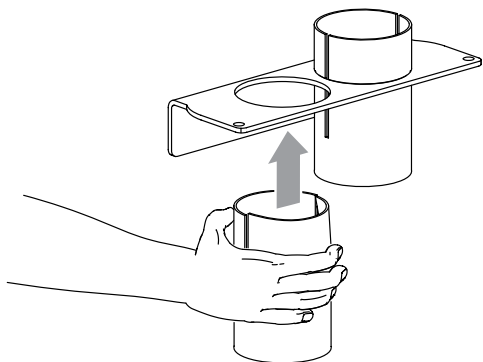
Total number of springs	Drive side			Non-drive side		
	Springs	Spring straps	In small parts box: guide tube(s), strap bracket, guide bracket(s)	Springs	Spring straps	In small parts box: guide tube(s), strap bracket, guide bracket(s)
1						  
2						  
3			  			  
4			  			  
5			  			  
6			  			  
7			  			  
8			  			  
9			  			  
10			  			  
11			  			  
12			  			  

NOTE: a four-spring, two-assembly configuration is shown for these steps.

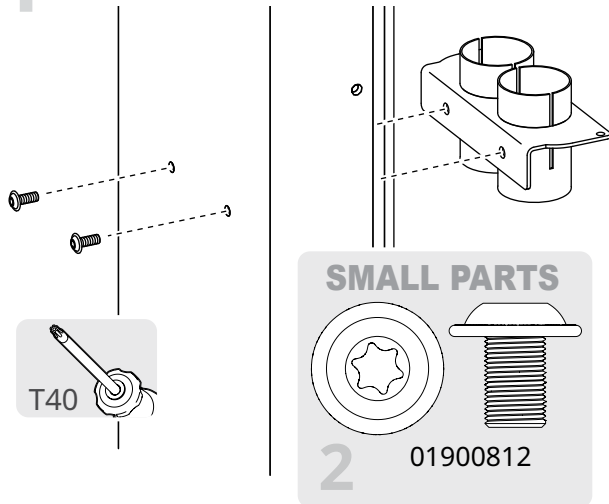


It is recommended that you **do not use power tools** for these steps. Over-torquing screws can damage parts.

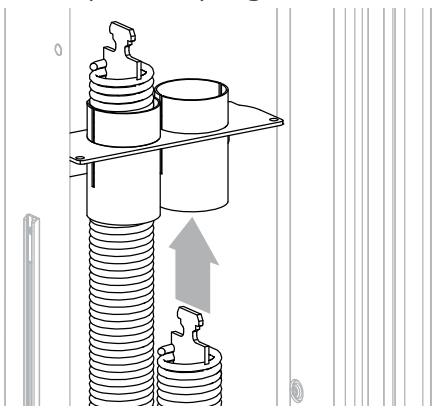
- 3** **Install** the guide tubes into the guide bracket. **Squeeze** the top of the tube, then slide the tube into a guide hole until it clicks into place.



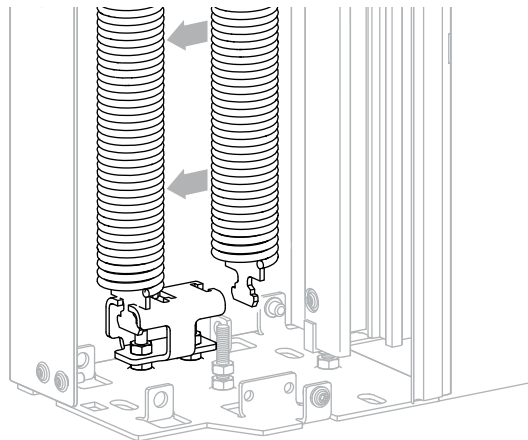
- 4** **Install** the bracket into the side column.



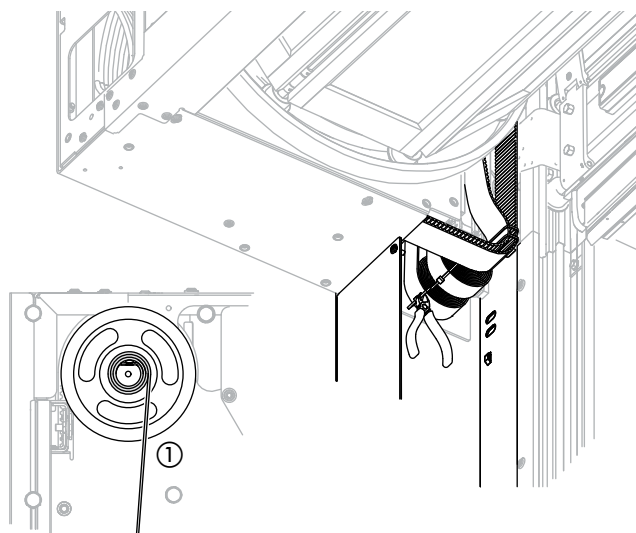
- 5** **Slide** the top of the springs into the bracket.



- 6** **Slide** the bottom spring tabs into the slots in the baseplate tube. The spring should remain upright.



- 7** **Cut cable tie** on the outer spring strap and let it drop.

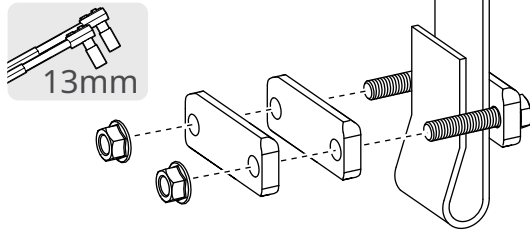


NOTICE

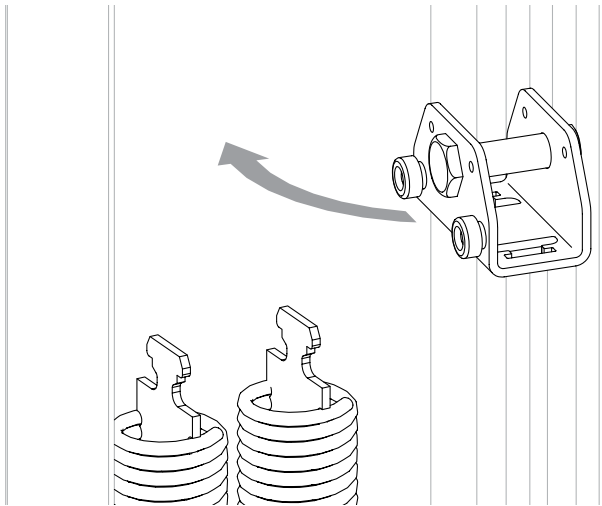
Do not unspool strap from the drum to get more length.

The strap is pre-wrapped to match the specification for the door ①. These wraps are required for the door to operate correctly and must not be changed.

8 Loosen the clamp on the spring strap.



9 Position the spring bracket so that the bumpers and locking tab face the side wall.

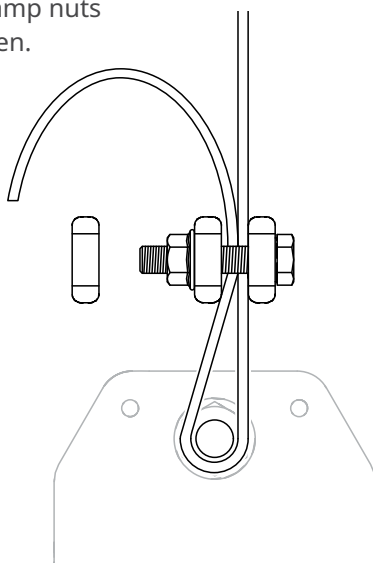


10 Loop the spring strap around the bolt in the spring bracket, then back between two plates of the clamp.

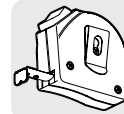
Replace the clamp nuts and hand tighten.

IMPORTANT

DO NOT trim the strap.



11 Set the spring tension for the spring assembly. Spring tension is the distance the springs must be stretched to provide the correct tension for the door.



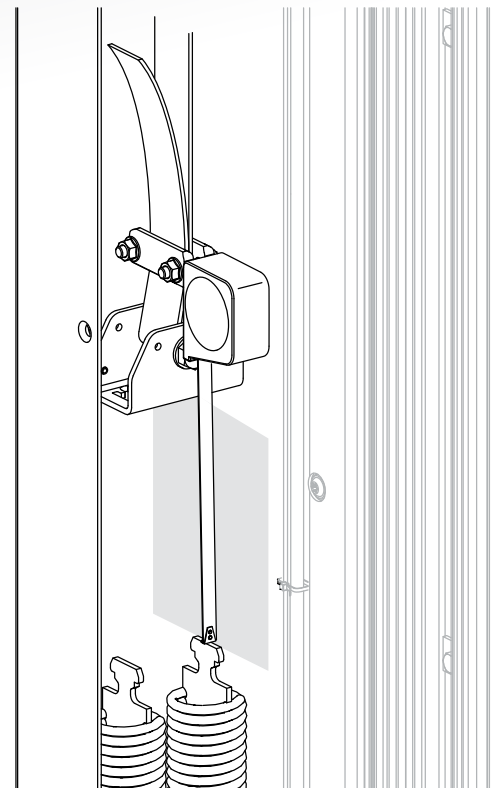
Measuring tape

Locate the spring tension on the Object List ①. **Round** to the nearest 1/16 inch.

.063	1/16	.313	5/16	.563	9/16	.813	13/16
.125	1/8	.375	3/8	.625	5/8	.875	7/8
.188	3/16	.438	7/16	.688	11/16	.938	15/16
.250	1/4	.500	1/2	.750	3/4		

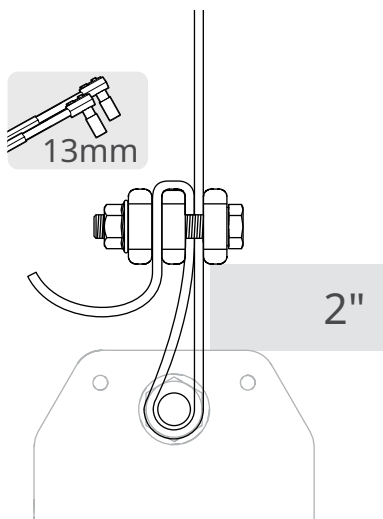
Measure the distance between the bottom of the spring bracket and the top of spring tab (shaded area).

Object list		Material number	
Original		724	
Material description		Order number	Order quantity
SPIRAL STT-L		20000597	1 EA
MSPT controller	Production scheduler	Order type ZP02	Start
500	T7	RYTEC MTO Order	06/03/2019
B5 ZMAT	Tier 7		Finish
			06/05/2019
Status	REL MSPT PRT PRC SETC	Plant	Reservation number
		2000	0002425475
		Rytec Corporation -	Creation Date
			05/31/2019
Serial number			
D0091893-010			
Configuration			
DOOR MODEL NAME Spiral Pull Vision "L"			
Door Width (Inches) 144.094			
Door Height (Inches) 128.346			
Production Width in mm 3,660			
Production Height in mm 3,260			
Door head size 8			
Line Voltage 460V			
motor mount side Right 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 4			
Spring Tension (in) 4.724 4-3/4 ①			
LN Inner Spring Pack Qty 0			
LN Outer Spring Pack Qty 2			
RN Outer Spring Pack Qty 2			
RN Inner Spring Pack Qty 0			
Spring constant 122			

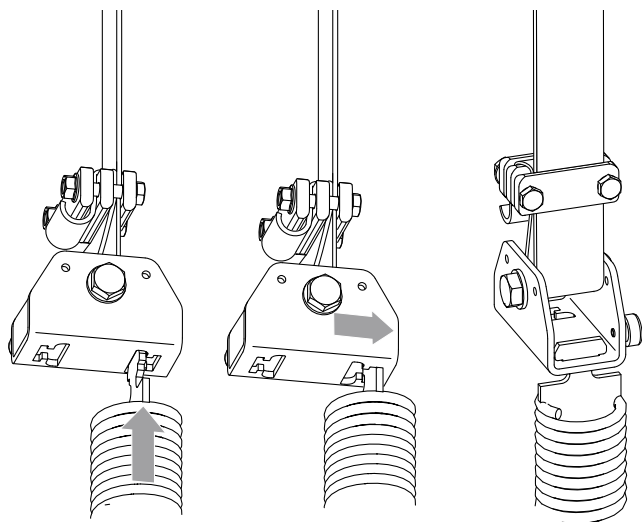


- 12** **Adjust** the strap until the measured distance matches the Object List and the distance from the clamp to the bracket is two inches (2").

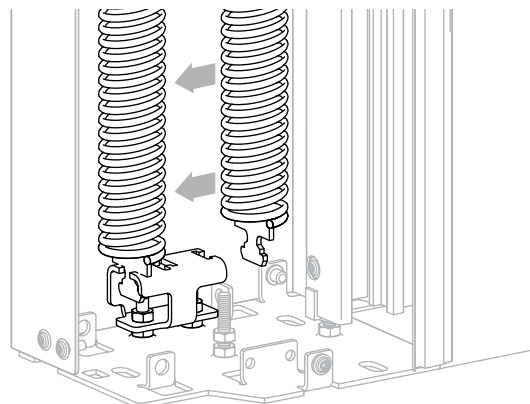
- 13** **Remove** the nuts.
Loop the strap down between the second and third clamp plate.
Tighten the nuts to secure the strap.
 If necessary, **trim** excess strap length.



- 14** **Release** each spring from the baseplate tube.
Lift each spring and **slide** the spring tab into the slot in the spring bracket.

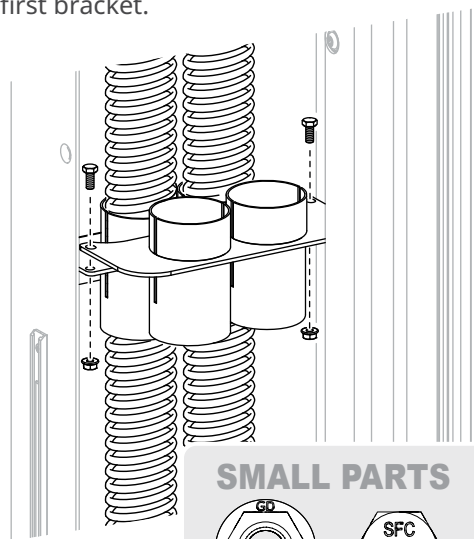


- 15** **Stretch** the springs downward.
Slide the bottom spring tabs into the slots in the baseplate tube.

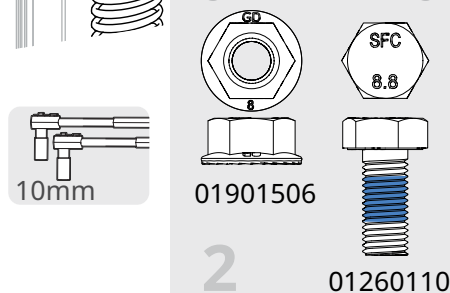


How to install a second assembly in the side column

- 1** **Install** the guide tubes into the second bracket. **Install** the second bracket above the first bracket.



SMALL PARTS



- 2** **Follow** steps 3-15 for installing the springs.
Make sure the spring bracket bumpers face out, towards the first spring assembly.