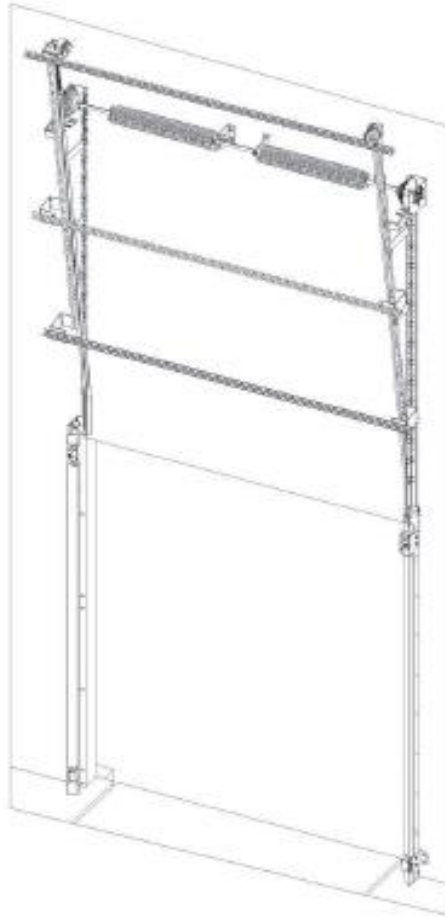


# PxV™ INSTALLATION GUIDE

## Tilt Back Doors

Models DR0880-TB thru DR0888-TB  
Tilt back Door (Torsion Spring)



**PxV™**  
**ENERGY-ABSORBING DOCK DOOR**

*A Product of*



340 Gateway Park Drive  
North Syracuse, NY 13212

Phone: 315-463-7348

Toll Free: 866-235-7468

Fax: 315-463-8559

Email: [sales@dlmanufacturing.com](mailto:sales@dlmanufacturing.com)

[www.dlmanufacturing.com](http://www.dlmanufacturing.com)

# PxV Door Installation Guide

## Table of Contents

Page 1	Approved Installer-Supplied Hardware & Fasteners
Page 2, 3	Manufacturer-Supplied Hardware
Page 4	Key Measurements and Part Locations
Page 5	Required Tools and Track Alignment Instructions
Page 6	Preparing to Install the PxV Door
Page 7	Installing the Mounting Rails, Plastic Door Tracks
Page 8, 9	Installing the Roller track and Bearing Brackets
Page 10	Installing Safety Brackets and Perforated Angles
Page 11	Installing Door Panels
Page 12	Cable Attachment
Page 13	Installing Torsion Springs
Page 14	Installing the Header Seal
Page 15	Installing the Upper Side Seal Assemblies
Page 16	Installing Toe Plates and Safety Cables
Page 17	Final Door Installation Checklist
Page 18	Door Installation Troubleshooting Guide
Page 19	PxV Maintenance Procedures / DL Manufacturing Warranty

### >WARNING!!

***Installers should completely review this manual prior to starting. Please use extreme caution and proper techniques when handling springs, counterweights and associated parts to avoid injury. Only qualified professionals are recommended for installation of this product.***

***Do not expose panels to outside elements during storage. Painting of the panels will void DL Manufacturing warranty. Direct handling of panels with forklifts or other machinery is not advised. In all cases above, damage outside of warranty will be caused to product.***

# PxV Door Installation Guide

## Approved Installer-Supplied Hardware & Fasteners

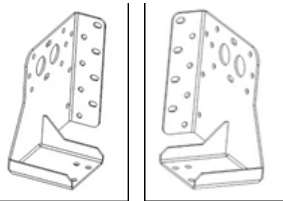
	Fastener Type / Hardware	Quantity
<input type="checkbox"/> Hardware for 2 Mounting Rails	<ul style="list-style-type: none"> <li>Hollow Concrete Block –3/8" x 1-1/2" hollow set drop in anchor and 3/8" washer.</li> <li>Concrete –3/8" x 2" sleeve anchor and 3/8" washer.</li> <li>Structural Steel –3/8" x 1-1/2" self tapping screws and 3/8" washer (If Welding, see welding section below).</li> <li>Wood backed by solid material –3/8" x 3" Anchor and 3/8" washer. (Type of anchor used will depend on type of solid backing. See above methods).</li> </ul>	14
<input type="checkbox"/> Hardware for 2 Bearing Plates	<ul style="list-style-type: none"> <li>Hollow Concrete Block –3/8" x 1-1/2" hollow set drop in anchor and 3/8" washer.</li> <li>Concrete –3/8" x 2" sleeve anchor and 3/8" washer.</li> <li>Structural Steel –3/8" x 1-1/2" self tapping screws and 3/8" washer (If Welding, see welding section below).</li> <li>Wood backed by solid material –3/8" x 3" Anchor and 3/8" washer. (Type of anchor used will depend on type of solid backing. See above methods).</li> </ul>	16
<input type="checkbox"/> Hardware for Header Seal Brush	<ul style="list-style-type: none"> <li>Hollow Concrete Block –5/16" x 1" TAPCON screws.</li> <li>Concrete –5/16" x 1" TAPCON screws.</li> <li>Structural Steel –5/16" x 1/2" self tapping screws and 5/16" washer.</li> <li>Wood –5/16" x 1" Anchor and 5/16" washer.</li> </ul>	5-10
<input type="checkbox"/> Hardware for Top Side Seal Brushes	<ul style="list-style-type: none"> <li>5/16" x 1/2" Self Tapping screws.</li> </ul>	4

## Approved Welding Methods

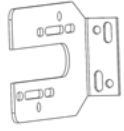
<input type="checkbox"/> Fillet Welds	1/8 Fillet Weld 1-1/2" long every 18"
<input type="checkbox"/> Plug Welds	Plug weld every hole

# PxV Door Installation Guide

## Manufacturer-supplied hardware & fasteners Common Parts



**DR4789&DR4790**  
Bearing Bracket (LH&RH)

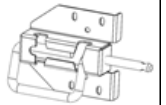


**DR4582**  
Center Bracket



**DR4695**  
Universal Lock Receiver

**DR2280**  
Slide lock



**DR2184**  
Universal Lock



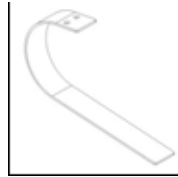
**HEX HEAD BOLTS**  
**CP2104** 3/8"-16x1-1/2"  
**CP2105** 3/8"-16x1"



**CP2046**  
1/4" -20 Flange Lock Nut



**DR4417**  
C-Bracket (Qty-4)



**DR2195**  
Leaf Bumper

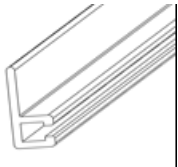


**WASHERS**  
**AT2012** 3/8"  
**CP2061** 1/2"



**AT2018**  
1/4" -20x3/4 Flange Bolt

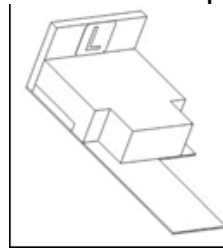
**NYLOCKS**  
**CP20915/16-18**  
**CP20563/8-16**  
**CP20601/2-13**



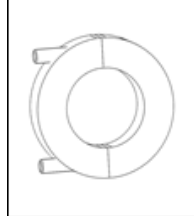
**DR2121**  
Header Seal



**Door Cables**  
**DR5299/DR5300/DR5301**  
5/32" Door Cable (Qty 2)



**DR5431/DR5432**  
Upper Track Seal



**DR2095**  
1" Split Shaft Collar



**DR4696**  
Corrective slot backer plate



**DR2102**  
1" Bearing



**DR2228**  
3/16"x1/4" Shaft Key



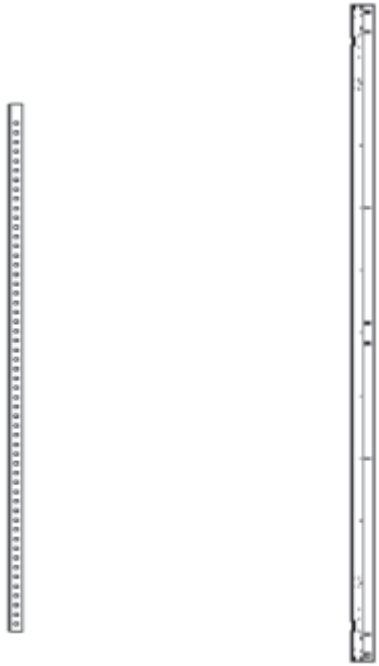
**DR2035**  
Pulldown Rope



**DR2102**  
1" Bearing

**DR2210**  
1" Hollow shaft (keyed)

# PxV Door Installation Guide

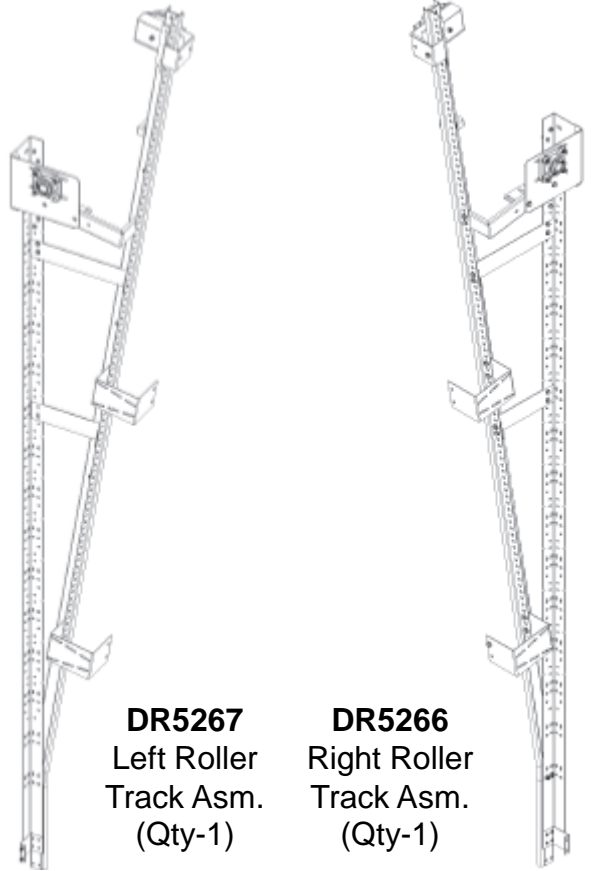


**CP2123**

Perforated Angle Qty (2)

Mounting Rail

**DR4726**- Qty (0 or 2)  
**DR4411** – 8'6" (Qty 2)



**DR5267**  
Left Roller  
Track Asm.  
(Qty-1)

**DR5266**  
Right Roller  
Track Asm.  
(Qty-1)



**DR2086**

Vertical Lift Drums  
1L (Red) & 1R (Black)

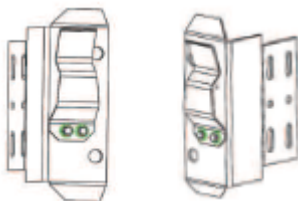


**Torsion Spring**  
1L (Red) & 1R (Black)

**DR2340**

3/8" x 1" polyester foam with PSA one side

## Optional Feature Parts



Hold Down Brackets  
**DR5516** Qty(1)  
**DR5517** Qty(1)

# PxV Door Installation Guide

JD = Job Dependent  
See Certified Drawings

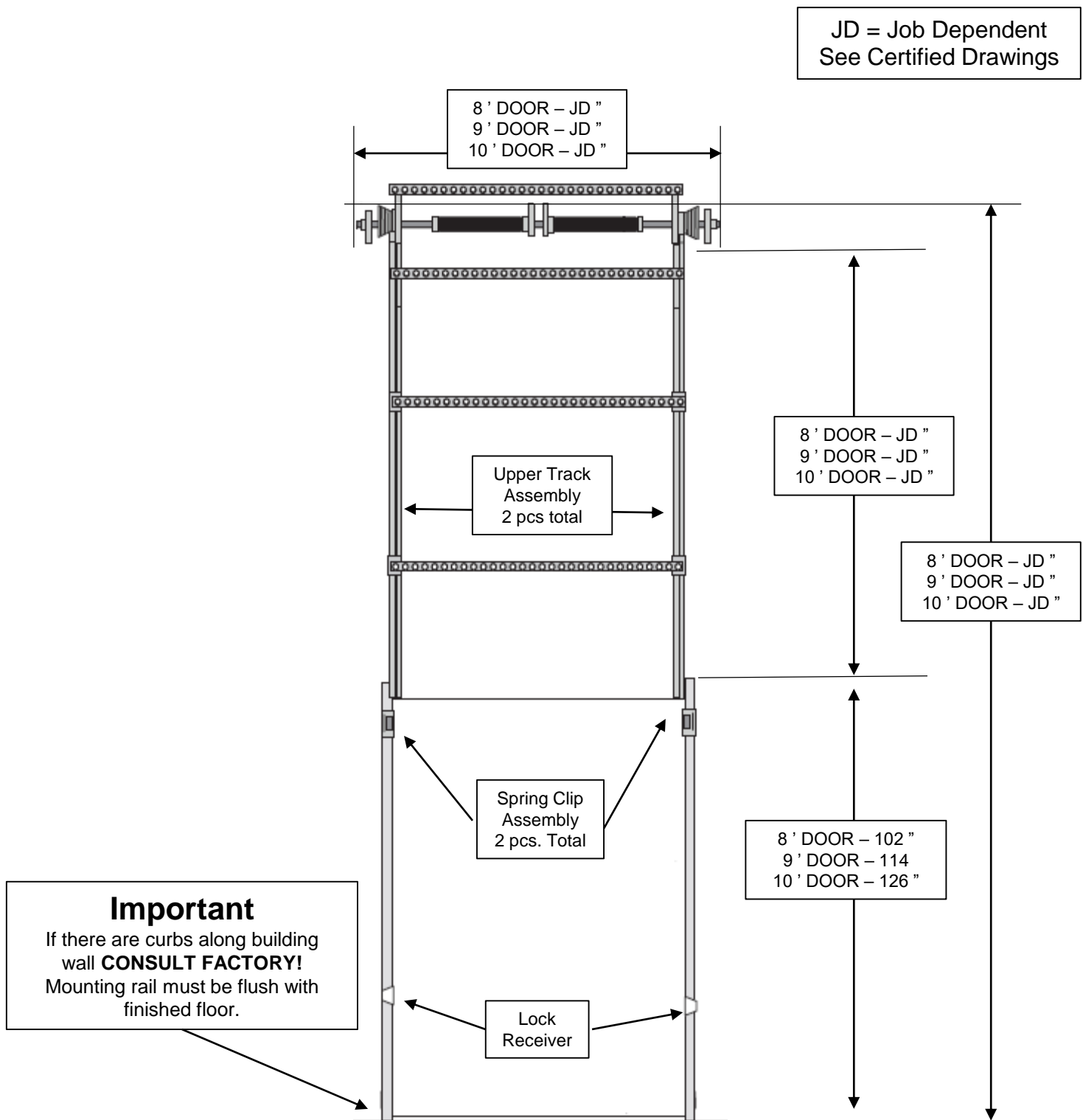


Figure 1. Key Measurements and Locations of Mounting Rails and End Bearing Assemblies.

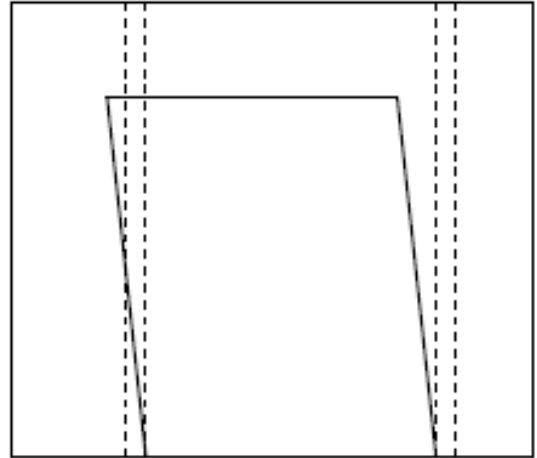
# PxV Door Installation Guide

## >IMPORTANT!!

Track support and alignment are critical!!!

The following conditions are required for the installation of the PxV door:

1. Door jamb is plumb and true.
2. Adequate mounting surface available for Mounting Rails and End Bearing Assemblies.
3. Door jamb and walls must be inspected for decay, damage, crumbling etc. If a solid surface does not exist, the door jamb or wall must be repaired or rebuilt.



**Figure 2.** Proper track alignment when door frame is out of square (drawing not to scale).

## Required Tools & Supplies

<input type="checkbox"/> Measuring Tape	<input type="checkbox"/> 1/8" hex Driver
<input type="checkbox"/> Plumb Bob	<input type="checkbox"/> Screwdrivers
<input type="checkbox"/> Drill with 1/4" drill bits	<input type="checkbox"/> 3/8" Wrench or Nut Driver
<input type="checkbox"/> Pliers or Vise Grip	<input type="checkbox"/> 7/18" Wrench nut Driver
<input type="checkbox"/> 4" Long Level	<input type="checkbox"/> 1/2" Wrench or Nut Driver
<input type="checkbox"/> Torsion Spring Winding Bars	

**Proper alignment of the Mounting Rails is critical to proper operation of the door. Use a plumb bob and level to ensure that each rail is level and square before fastening it to the door frame. In addition, if the door frame is not square, set rails so that they align with each other rather than with the door frame (SEE FIGURE 2).**

## >IMPORTANT!!

*Installers may determine that installation conditions require welding mounting rails to the facility wall rather than using fasteners. Do not attach track to the Mounting Rail before welding. **Be sure to check local and client requirements for welding and burn permits.***

**INSTALLERS MUST FOLLOW O.S.H.A. & LOCAL SAFETY GUIDELINES!!!**

# PxV™ Vertical Door Installation Guide

## > Preparing To Install PxV Mounting Rail and Track

### NOTE:

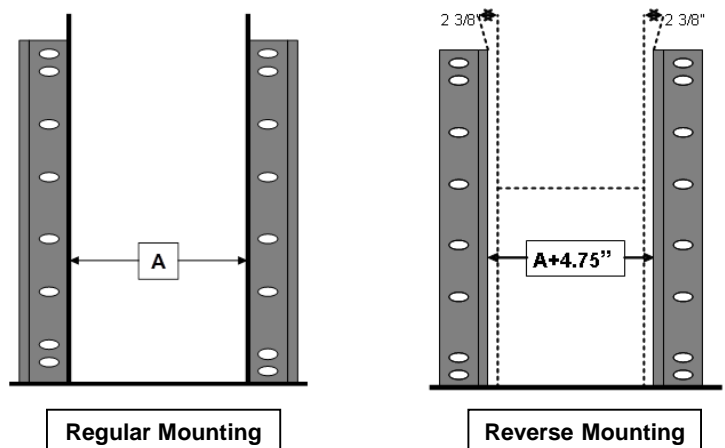
The PxV door is built to customer specifications. Verify that measurements taken on the job site match those specified in the approval drawing provided with the door. If measurements **DO NOT** match those specified in the approval drawing please call our Service Department toll free for assistance. **1-866-235-7468**

1. Check parts list to verify that all required factory-supplied parts are present.
2. Gather all required installer-supplied fasteners and hardware (**See "Approved Installer-supplied Hardware & Fasteners" See page 5**).
3. Verify the minimum clearance to the sides and above the door. (**SEE FIGURE 1**).

## >Installing the Mounting Rails and Plastic Track

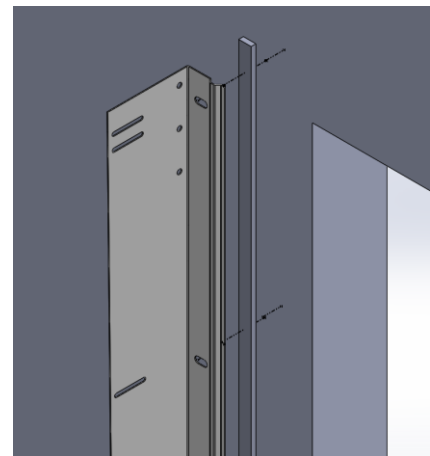
### NOTE:

All four mounting rails are identical and may be reversed. If door jamb or wall conditions restrict you from installing the mounting rails as indicated, flip the rail around and attach them so that the short leg is facing away from the door opening and flush to the wall. Snap a new plumb line  $2\frac{1}{4}$ " to the outside of the initial line. The mounting rails should end up  $4\frac{1}{2}$ " plus door opening width apart (**SEE FIGURE 3**).



**Figure 3.** Regular and reverse mounting of Mounting Rails.

1. Take polyester foam strip and stick the side with PSA against mounting rail. Place foam on exterior face of the mounting rail's short leg. The foam should be compressed between the mounting rail and wall when door is installed (**See Figure 4**).
2. Ensure that foam does not totally cover the mounting holes in the short leg of the mounting rail.



**Figure 4**  
Attaching Mounting Rail Foam



# PxV™ Vertical Door Installation Guide

## NOTE

Mounting rails may be shimmed out from the door frame up to 1/2" to align them with each other. If the door frame is out of plumb by more than 1/2", contact factory before proceeding with install.

1. Align short leg of Mounting Rails with the door jamb so the distance apart matches the "A" dimension on the approval drawing. If you cannot locate this measurement in the included paperwork, please call DL Manufacturing. If there are short pcs of mounting rail, locate them at the bottom of the stack closest to the floor.
2. Attach Mounting rails to wall using approved installer-supplied fasteners. Ensure Mounting Rails maintain the same spacing all the way to the top. Rails **MUST BE** kept level/plumb throughout. MOUNTING RAIL SPACING tolerance is  $\pm 1/8"$ . Re-measure spacing between Mounting Rails.

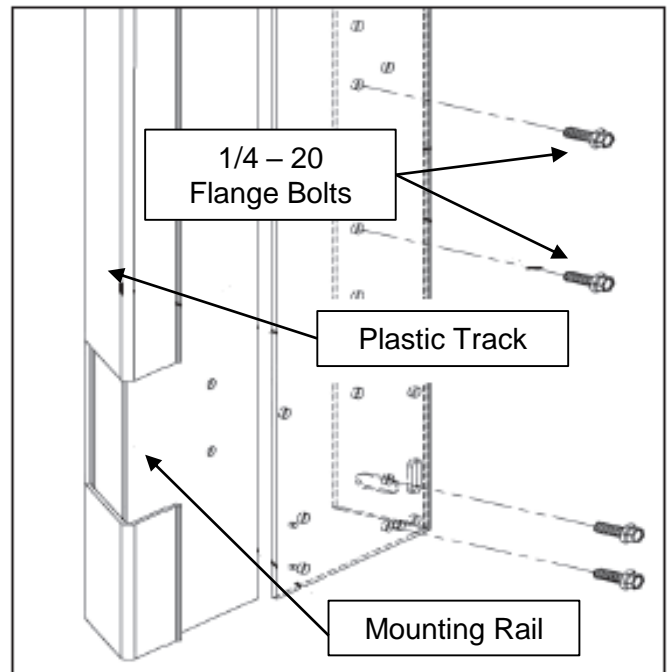
## >IMPORTANT!!!

*Do not attach plastic track to mounting rail until mounting rail is attached to the wall.*

## NOTE

Plastic tracks are mounted on the mounting rails. Plastic tracks are labeled to indicate position. BL=bottom left. BR=bottom right.

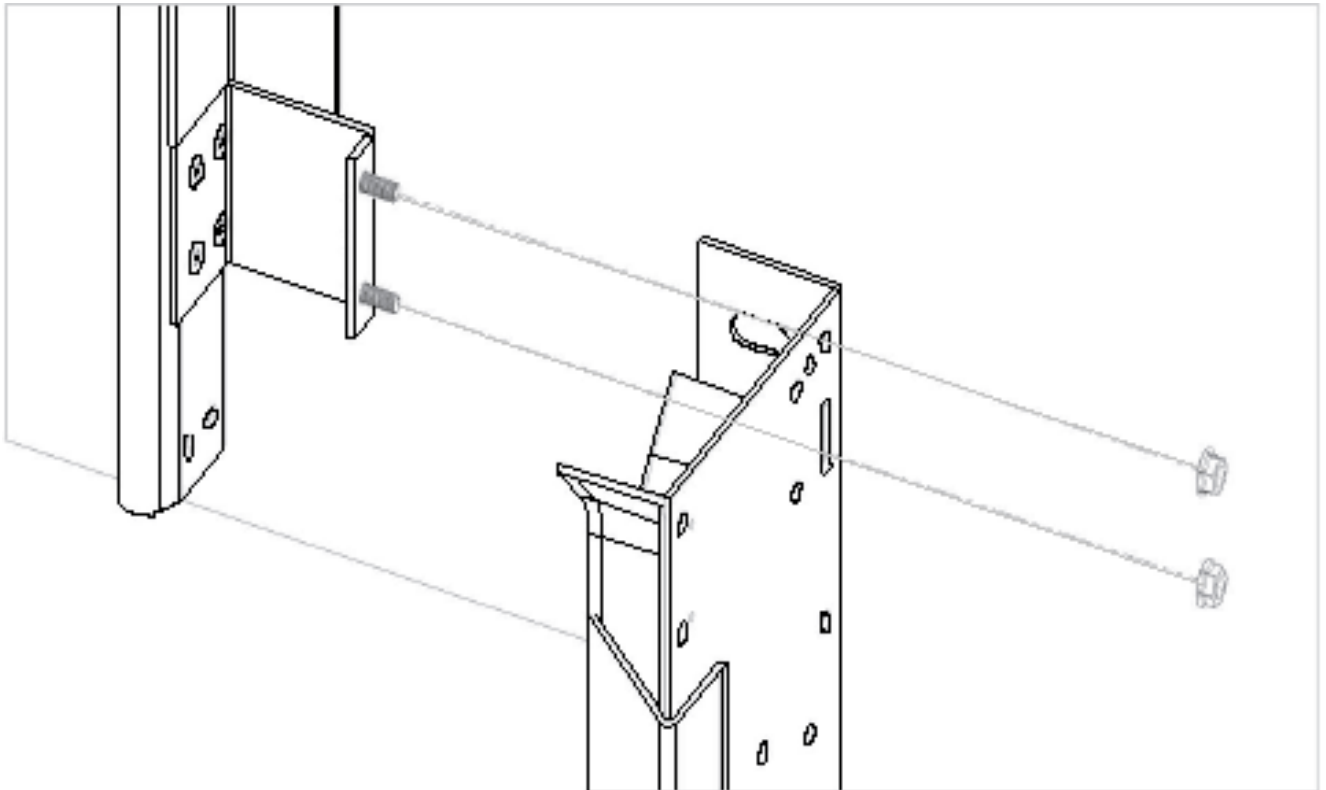
3. Attach the plastic door tracks onto the installed mounting rail on both sides of the door opening (BR + BL).
  - Slide the track over the mounting rail so the webbed portion is pointing into the door opening.
  - Ensure that the track is flush to the floor and fully seated over the mounting rail.
  - Using the pre-drilled holes in the mounting rail as guides, drill 1/4" holes through the track. Apply heavy pressure to the track while drilling holes to ensure the track will be fully seated.
  - Insert 1/4" – 20 x 3/4" flange bolt through the holes so that the head is outside the track (touching the mounting rail) and the 1/4"-20 flange nuts are inside the track (touching the plastic track.) **(SEE FIGURE 5)**



**Figure 5** Attaching plastic door track.

## > Installing the Roller Track and End Bearing Assemblies

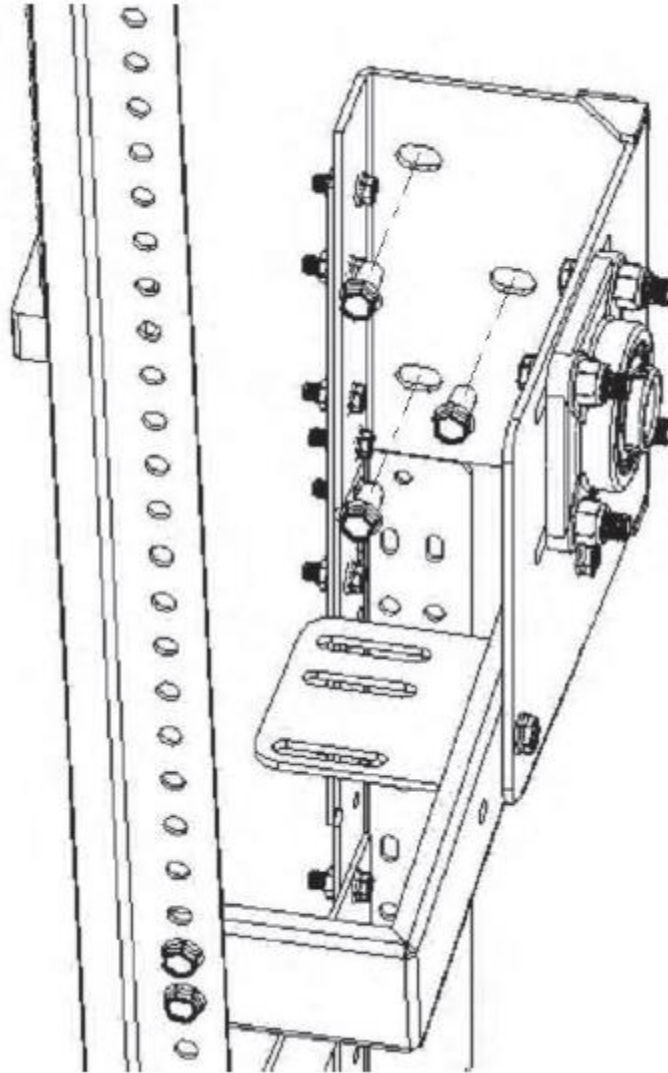
1. Attach Upper Track Assembly to Mounting Rail (*Use 4' Level to ensure Upper Mounting Rail Assembly is plumb* **SEE FIGURE 5**).



**Figure 5.** Attaching Upper Track Assembly to Mounting Rail.

## PxV™ Vertical Door Installation Guide

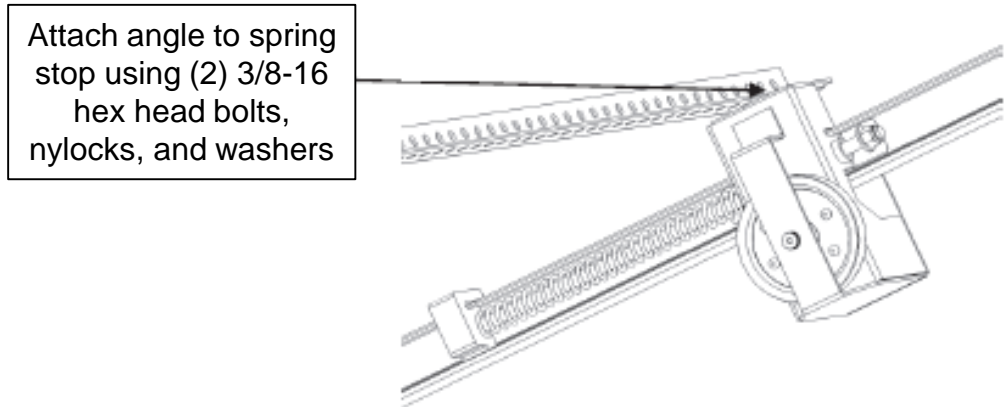
2. Attach Bearing Assemblies to mounting surface. (*Use 4' Level to ensure Upper Mounting Rail Assembly is plumb* **SEE FIGURE 6**).



**Figure 6.** Attaching Bearing Assemblies to wall.

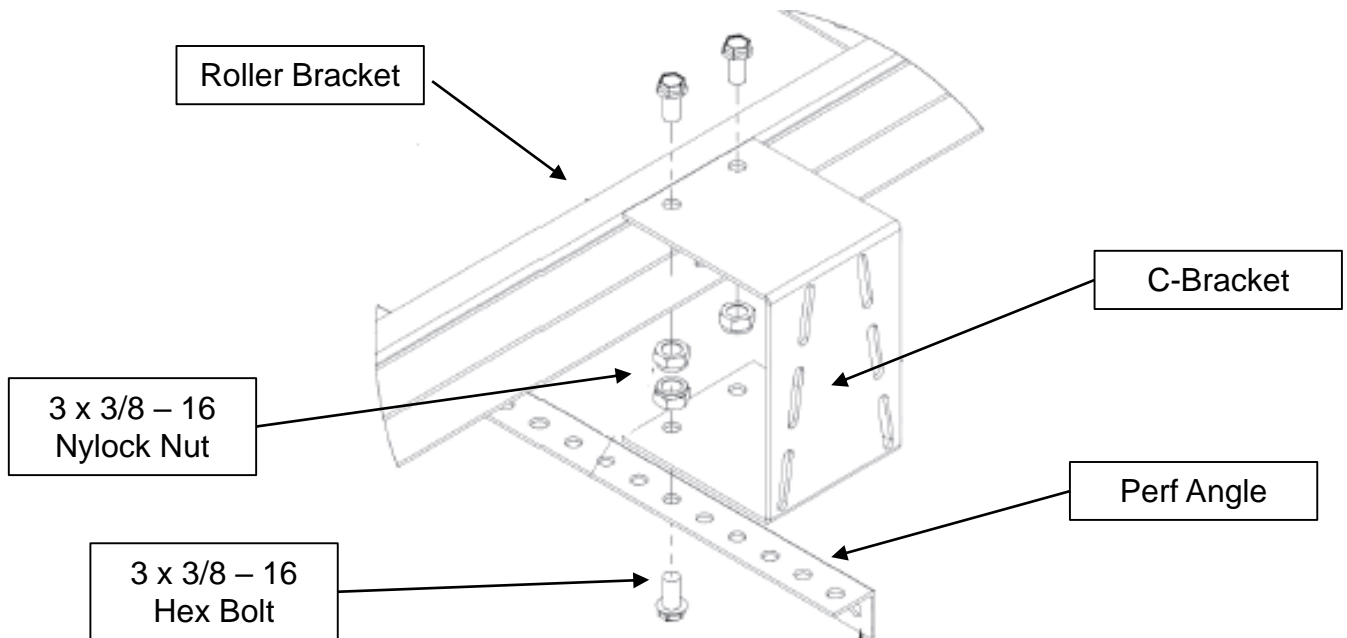
## >Installing the Safety Brackets & Perforated Angle

1. Attach Perforated Angle between spring stops. (*Distance between Roller Tracks should match measurement on Installer Information Sheet SEE FIGURE 7*).



**Figure 7.** Attaching Perforated Angle between Spring Stops.

## **Figure 8.** Attaching Perforated Angle and C-Brackets



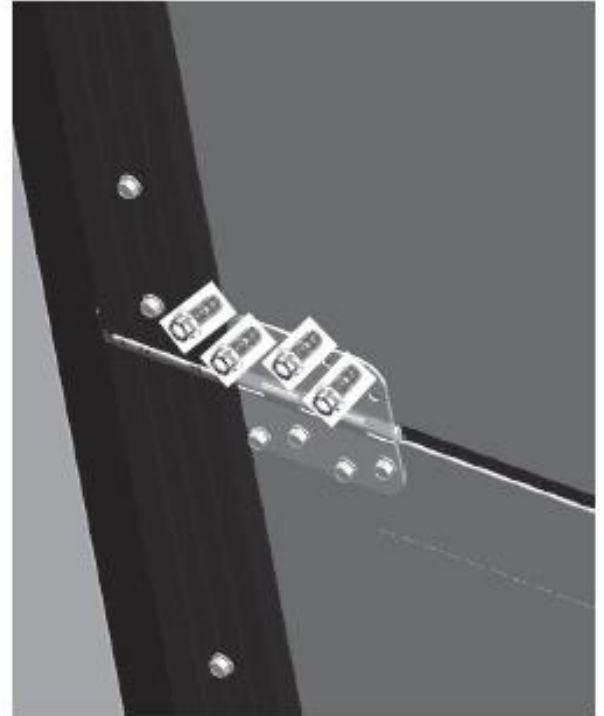
**Figure 8.** Attaching Perforated Angle and C-Brackets

## >Installing the Door Panels

### NOTE

Door panels are numbered to indicate the order of installation. Panel 1, which has the bottom rubber or optional brush seals, goes on the floor. Panels 2, 3 or 4 are middle panes. The panel with the header seal and lift bracket is at the top.

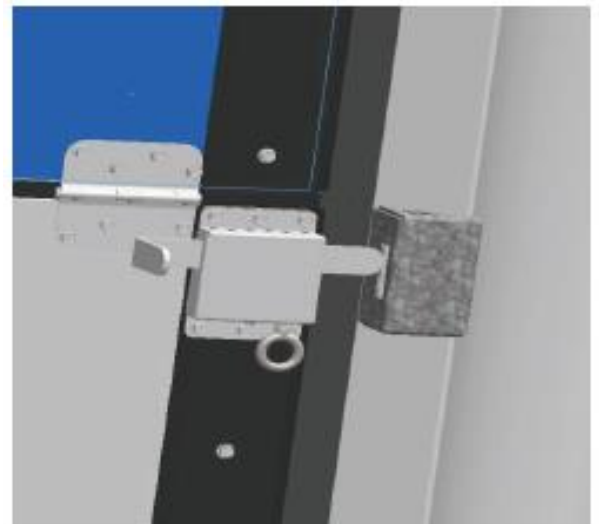
1. Position panel 1 with the bottom rubber seal at the floor (optional bottom brush is pointed toward the inside of the building) **THE HINGES ARE ON THE INSIDE.**
2. Feed the brushes into the brush guide ensuring all bristles are captured in the brush guide.
3. Lower the panel to the floor.
4. Insert Panel 2 in the same fashion as Panel 1, lowering to the top edge of the previously installed panel. Be sure not to pinch bristles or gap flaps between panels. Continue stacking all panels before fastening the hinges.
5. Using the ¼-14x1" Tek screws (4 each), secure the hinges from panel to panel (**SEE FIGURE 9**). **Be sure to use all the holes in the hinge total of 8 screws per hinge.**
6. Once all the hinges are fastened, install the tensioning cables on the outside of the door. Tension the cables so they are taught. Do not over tighten, as they will cause the panels to bow.



**Figure 9.** Hinge Installation.

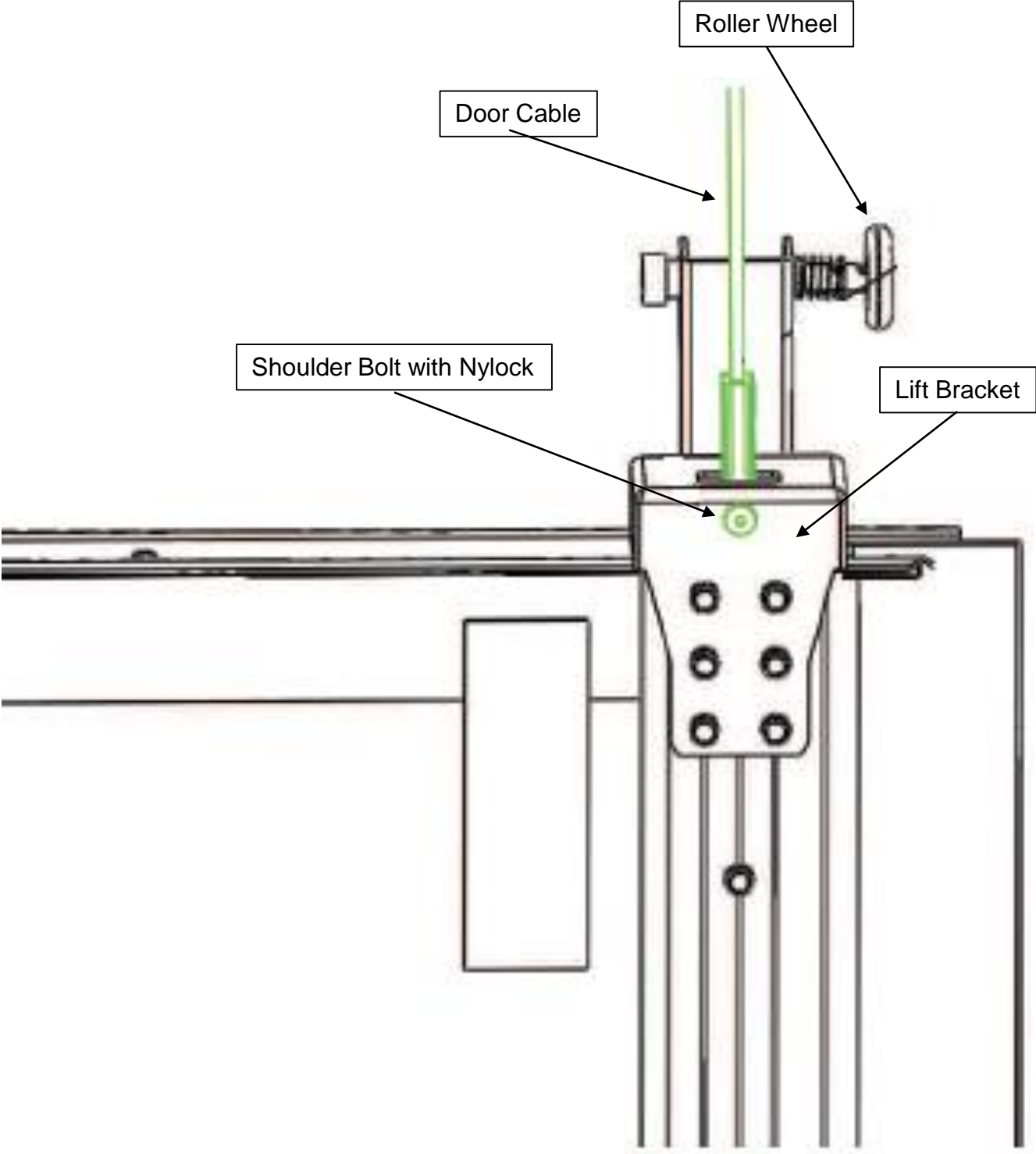
## >Installing the Locks and Receivers

1. Install the slide lock on the top right and left side hand side of panel #2 using (5) CP2189 tek screws.
2. Engage the slide bar of the lock and position the lock receivers so the top of the slot in the receiver is bottomed out on the top of the slide lock.
3. Once positioned properly, fasten the lock receivers to the track and mounting rail using at least (2) CP2189 screws.
4. Attach the pulldown rope to the eyelet on the bottom of the slide lock (**SEE FIGURE 10**).



**Figure 10.** Attaching Lock and Receiver (Right Side shown).

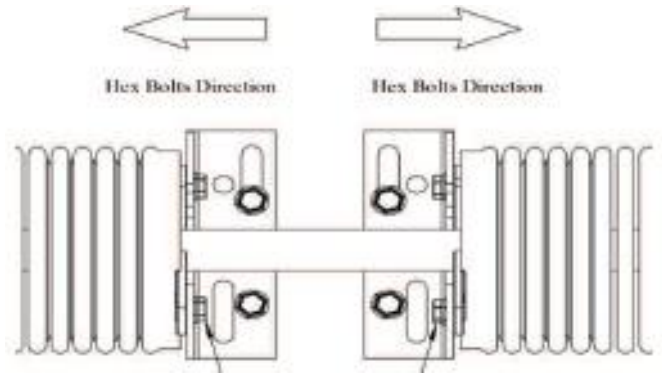
# PxV™ Vertical Door Installation Guide



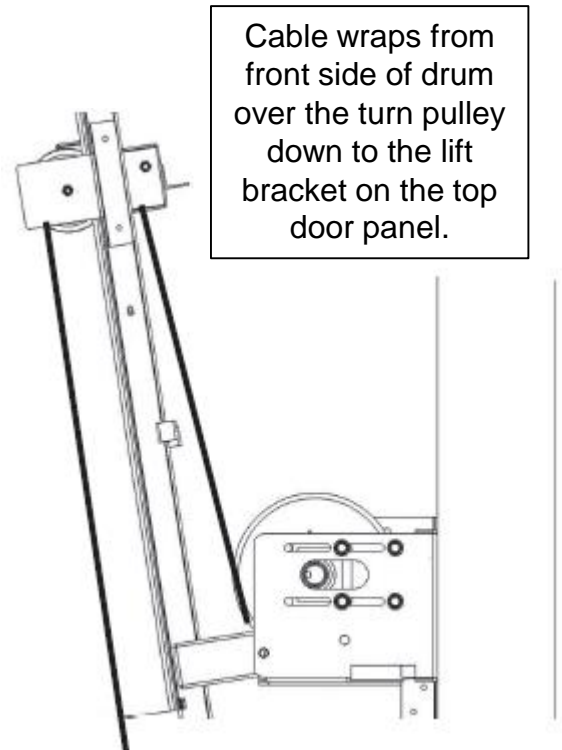
**Figure 11.** Cable Attachment to door.

## >Installing the Torsion Springs

1. Check stacked panels for level.
2. Lock door or tie off pull down strap to prevent door from opening while winding torsion springs.
3. Install Center Shaft Supports to wall.
  - a. Remove the Center Shaft Supports from the Torsion Springs.
  - b. Center the Supports between both End Bearing Assemblies, ensuring the Spring Shaft will be level.
  - c. Attach Center Shaft Supports to wall.
4. Installing the Spring Shaft
  - a. Slide left Cable Drum (red mark), left spring (red mark), left spring bearing, right spring bearing, right spring (black mark) and right cable drum (black mark) onto the spring shaft in the order above.
  - b. Insert each end of the shaft into Bearing Assemblies and ensure shaft is centered between assemblies.
  - c. Secure bearings so the center of the spring shaft is 5.75" off the wall.
  - d. Attach Torsion Springs to Spring Anchors **(SEE FIGURE 12)**.
5. Run right cable up and over outside of pulley **(SEE FIGURE 13)**.
6. Run cable under drum and attach cable to drum. Make sure the cable is seated properly in the grooves of the drum.
7. Turn shaft so the keyway in the drum and shaft line up and insert shaft key.
8. Fasten Vise Grips to the spring shaft with the handle braced against the wall to keep the cables taut.
9. Space cable drum so it is centered in line with the upper pulley bracket.
10. Tighten set screws on cable drum.
11. Repeat on left side.
12. Refer to "Installer Information" sheet for Torsion Spring winding information.
13. Be sure to lubricate the springs when done winding. Failure to do so will result in corrosion, decreased performance and possible damage!



**Figure 12.** Installing Spring Anchors



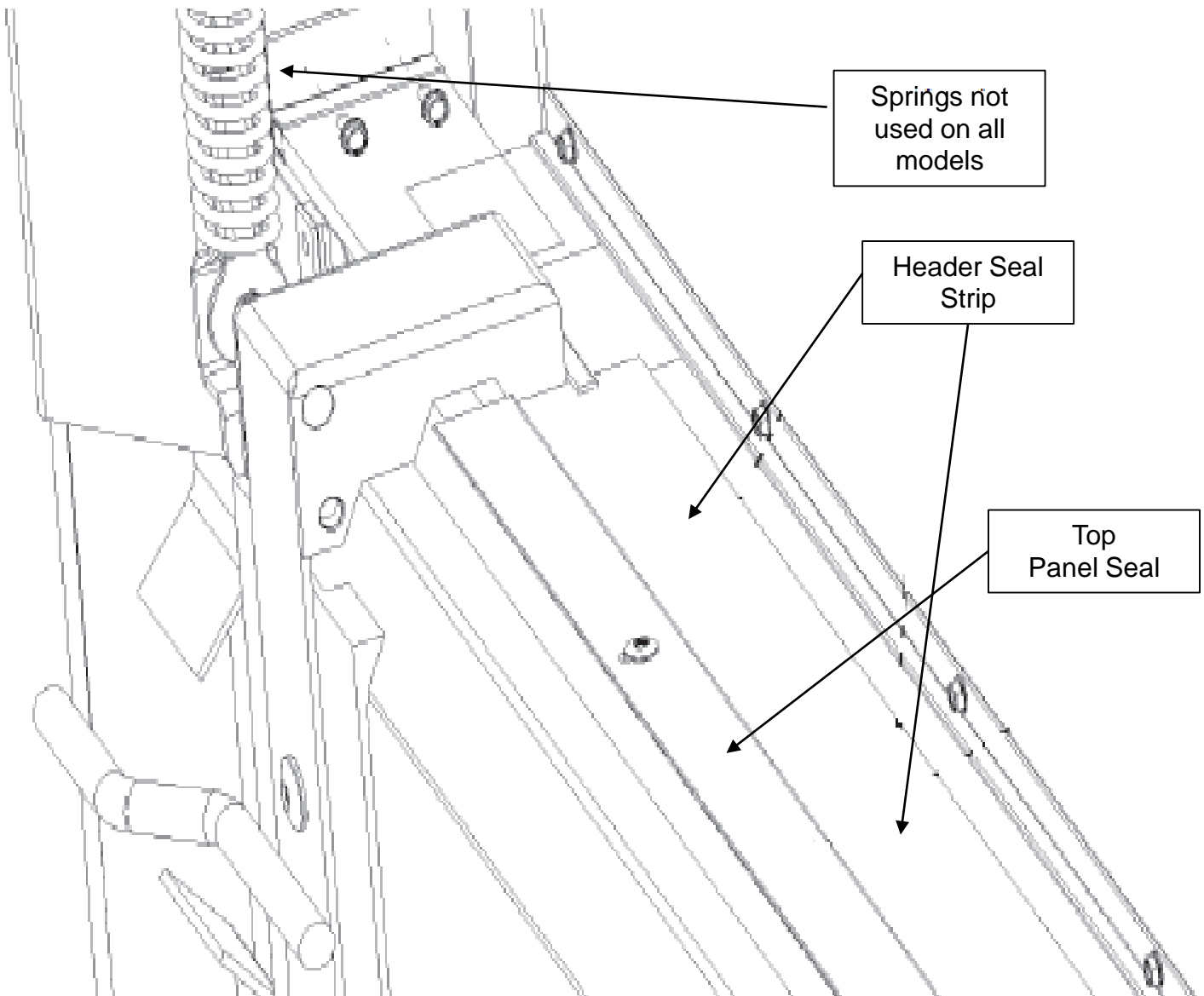
**Figure 13.** Attaching cable.

## >Installing the Header Seal Assembly

### NOTE

The Header Seal Assembly must make contact with the rubber seal attached to the top panel at all points. This creates the seal between the top of the door and the wall.

1. Attach Header Seal Brush Assembly to header using approved fasteners.



**Figure 14.** Installing Header Seal Assembly.

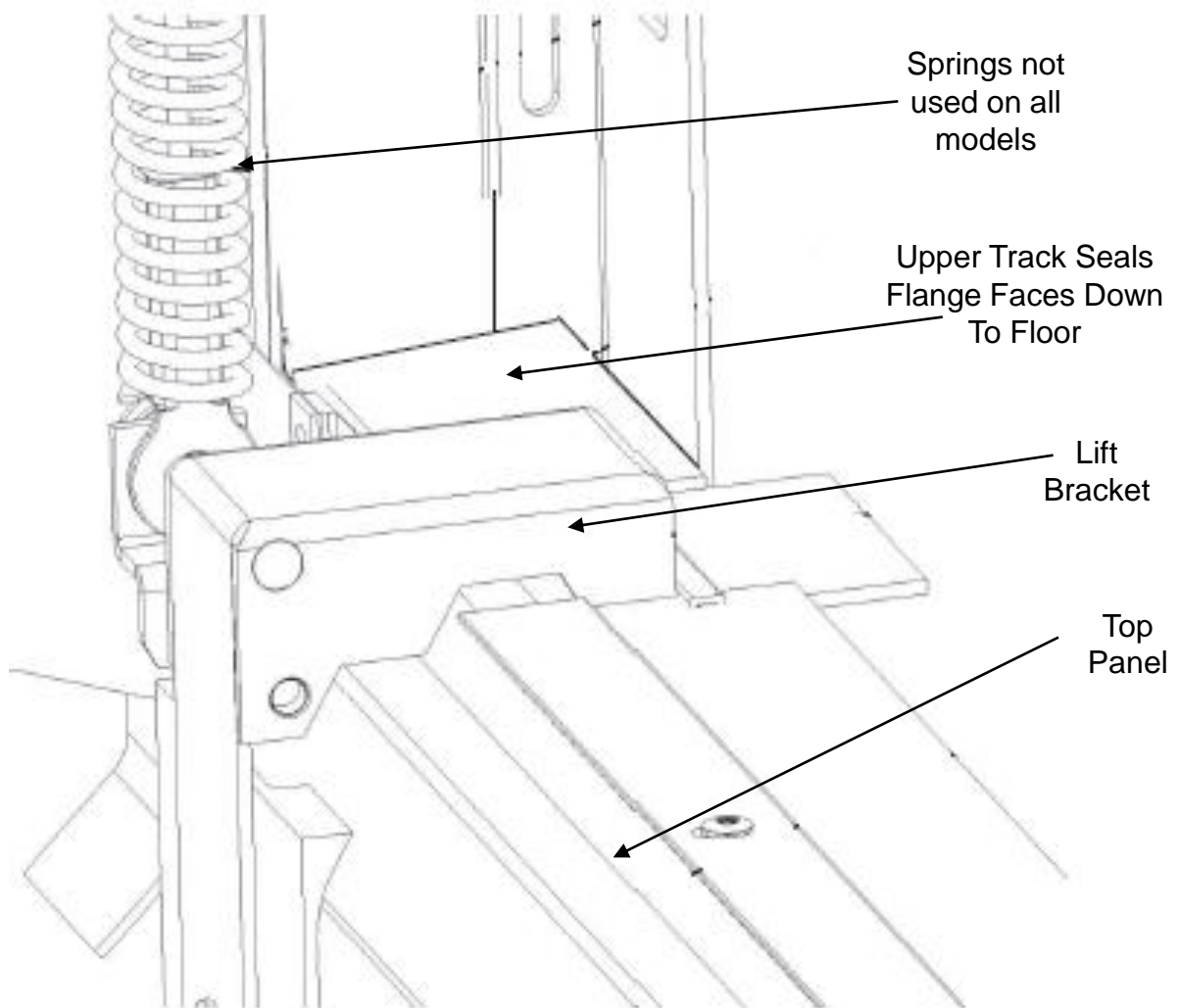


## >Installing the Upper Side Seal

### NOTE

To make the installation of the Top Side Seal Assemblies easier, raise the door all the way and pull the bottom two panels out of the track towards the inside of the building. This will allow you better access to the area where the Top Side Seal Assemblies will attach.

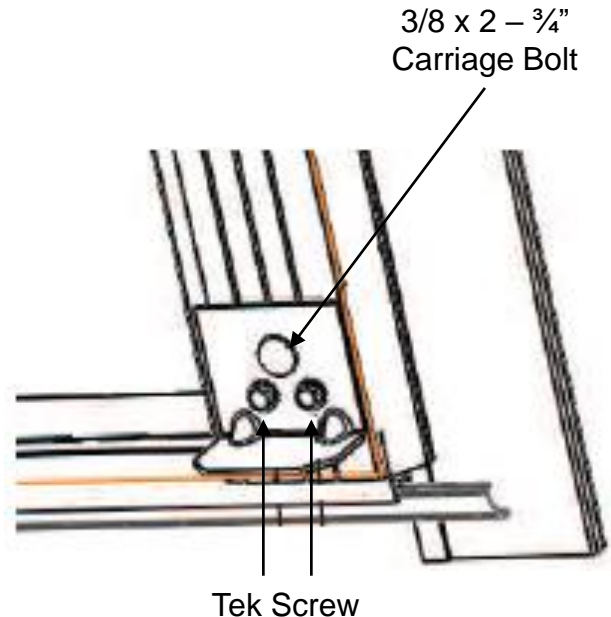
1. Position the Upper Seal assembly so it makes contact with the header seal. **(SEE FIGURE 15).**
2. Using supplied fasteners, attach the Upper Seal Assembly to the Mounting Rail. Make sure flange on seals is facing down towards the floor.
3. Repeat on other side.



**Figure 15.** Installing Top Side Seals.

## >Installing the Toe Plates and Safety Cables

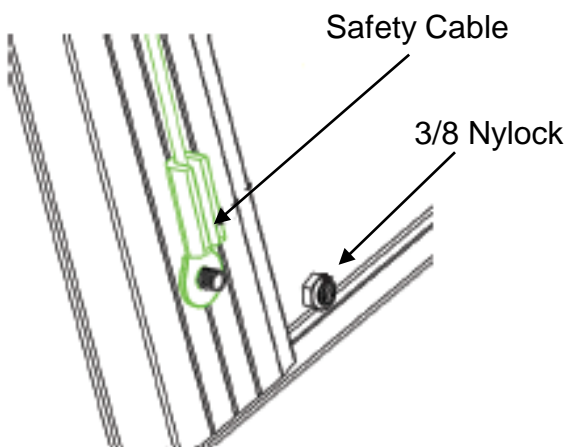
1. The toe plates are located at the outside bottom corners of panel #1.
2. After locating the pre-drilled holes on the panel, insert the 3/8"x2-3/4" carriage bolt through the toe plate.
3. Place the eyelet of the safety cable on the bolt and secure with a nylock (**SEE FIGURE 17**).
4. Turn the toe plate so it is parallel with the floor and install the (2) tek screws to prevent rotation (**SEE FIGURE 16**).
5. Repeat for other side of panel.



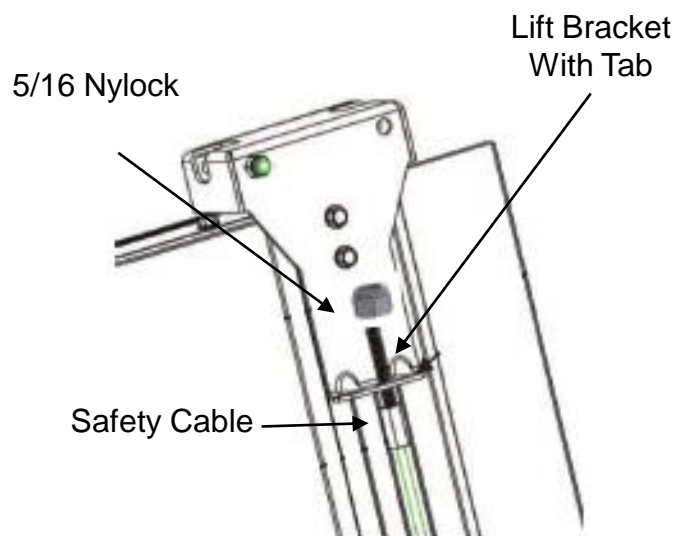
**Figure 16.** Installing Toe Plates.

## >Attaching Safety Cables

6. The loose end of cable is connected to the lift bracket on the top panel. The threaded end effect goes thru the tab in the lift bracket.
7. Secure with the 5/16" Nylock. The cable should be taut without pulling or bowing the panels (**SEE FIGURE 18**).
8. Repeat for the other side.



**Figure 17.** Installing Safety Cables to Panel #1.



**Figure 18.** Securing Safety Cables to the lift Bracket

## >Final Door Installation Checklist

- 1. Cycle door to confirm smooth, easy operation
  - Door does not drift down into door opening when fully opened.
  - Once started, door raises on its' own
  - Brush is fully seated in the brush guide of the track
  - Door does not drift up when Spring Clips are properly positioned
  - Cables move freely over cable tensioning arms
  - Adjust roller wheels to smoothly enter roller track
  
- 2. PxV door is sealed at all points
  - Top Side Seals are contacting the Header Seal
  - Header Seal is contacting Top Panel Brush at all points.
  - Gap Flaps are properly seated in the brush guide of the track and are not pinched between panels
  - Bottom Seal Flaps are fully seated in the brush guide of the track in the bottom corners.

### NOTE

Optional Bottom Seal Brush may not sit completely flush with the floor upon initial installation. Typically the brush will set to the uneven contours of the floor within 24-48 hours.

- 3. Ensure the Mounting Rail and Bearing Assemblies are securely mounted after several cycles of operation.
  
- 4. Ensure the PxV door can be knocked out into the door jamb and reset.
  - Knock door out into the door jamb.
  - Pull door back in past the door jamb, into the plane of the plastic track.
  - Raise door slowly to reset brushes back into the door track.
  
- 5. If PxV door has lock option, ensure all locks can be engaged and disengaged.

Installation Company: \_\_\_\_\_

Installer Name: \_\_\_\_\_

Date of Installation: \_\_\_\_\_

Jobsite Name and Location: \_\_\_\_\_

InstallerNotes: \_\_\_\_\_

\_\_\_\_\_

# PxV™ Vertical Door Installation Guide

## >Door Troubleshooting Guide

SYMPTOM	PROBABLE CAUSE	SOLUTION
<b>CABLES RUBBING</b>	<ul style="list-style-type: none"> <li>A. Cable Drum is not properly aligned.</li> <li>B. Shaft is not aligned properly.</li> </ul>	<ul style="list-style-type: none"> <li>A. Loosen set screws on Cable Drum and slide drum into proper position over cable guide. <b>(See Figure 11)</b></li> <li>B. Move spring shaft to align properly.</li> </ul>
<b>DOOR RAISES EASILY, CLOSSES HARD</b>	<ul style="list-style-type: none"> <li>A. Spring has too many winding turns.</li> </ul>	<ul style="list-style-type: none"> <li>A. Remove winding turns.</li> </ul>
<b>DOOR RAISES HARD, CLOSSES EASILY</b>	<ul style="list-style-type: none"> <li>A. Spring has too few winding turns.</li> </ul>	<ul style="list-style-type: none"> <li>A. Add Winding Turns.</li> </ul>
<b>DOOR OPERATES WITH TOO MUCH RESISTANCE</b>	<ul style="list-style-type: none"> <li>A. Door is not level.</li> <li>B. Door tracks are not plumb.</li> </ul>	<ul style="list-style-type: none"> <li>A. Check cable length and adjust accordingly.</li> <li>B. Re-measure track spacing and adjust accordingly.</li> </ul>
<b>DOOR DOES NOT ENGAGE LOCK RECEIVER</b>	<ul style="list-style-type: none"> <li>A. Lock Receiver is not properly installed.</li> </ul>	<ul style="list-style-type: none"> <li>A. Properly align Lock Receiver.</li> </ul>
<b>AIR LEAKAGE OR LIGHT SHOWING</b>	<ul style="list-style-type: none"> <li>A. Side Brushes are pinched or damaged.</li> <li>B. Door tracks are not plumb.</li> <li>C. Side Brushes and/or Gap Flaps are not in the track guide.</li> <li>D. Gap Flap is pinched between panels.</li> </ul>	<ul style="list-style-type: none"> <li>A. Check and repair Side Brushes</li> <li>B. Re-measure track spacing and adjust accordingly.</li> <li>C. Reset Side Brushes and/or Gap Flaps into the track Guide.</li> <li>D. Separate panels and reset Gap Flap in proper position.</li> </ul>
<b>DOOR DOES NOT KNOCK OUT OF DOOR JAMB</b>	<ul style="list-style-type: none"> <li>A. Door tracks are not centered on door opening.</li> <li>B. Obstruction in door jamb.</li> </ul>	<ul style="list-style-type: none"> <li>A. Detach and re-center door tracks.</li> <li>B. Remove obstruction from door jamb.</li> </ul>

# PxV™ Vertical Door Installation Guide

## >MxV Maintenance Procedures

	ITEM	PROCEDURE	MAINTENANCE INTERVALS	
			6 Months	12 Months
1	Cable Drums	Check all set screws and shaft keys and securely tighten.	X	
2	Cables	Lube & check for signs of abnormal wear or damage. Inspect all cables. Replace if needed.	X	
3a	Counterweight Doors	Inspect and check cable assembly, safety cog, cable tensioning device and counterweight basket assembly. Check and securely tighten all screws. Looks for signs of wear on cable.	Every 6 months	
3b	Counterweight Doors	Inspect bushing on tensioner arm for signs of wear every 6 months. Replace bushing after 15,000 cycles, or if showing signs of wear.	Every 6 months	
4	Torsion Spring Doors	Lubricate torsion spring, operate door to ensure the door clears the header. Adjust spring as necessary.	Every 6 months	
5	Seals	Check to ensure that seals aren't torn or fray.	As Needed	
6	Brush	Inspect for fraying	X	
7	End Caps/Hinges	Check for signs of abnormal wear or damage.	X	
8	Panels	Check for signs of abnormal wear or damage.		X
9	Track	Check for signs abnormal wear or damage		X
10	Track	Check for proper track spacing and alignment.		X
11	Track	Check and properly secure all track anchors.	X	
12	Track	Inspect corrective slots in tracks to ensure brush is properly resetting in track.	X	
13	Fasteners	Check and properly secure all fasteners.	X	
14	Spring Plate	Check the spring clip for proper positioning.	X	
15	Labels	Inspect all labels. Replace as needed.	X	
16	Panels	Clean with soap and hot water only. Call DL Manufacturing before using other cleaners.	As Needed	

# PxV™ Vertical Door Installation Guide

## WARRANTY POLICY

**NOTE: Do not paint doors. Painting door without factory written authorization will void all warranties**

~ All Products (excluding bulbs) manufactured by DL Manufacturing are warranted to be free from defects for a period of 12 months from the date of shipment, excluding doors, which have a warranty period of 12 months from date of installation or 18 months from shipment, whenever occurs first.

This warranty is subject to unreasonable/improper use or use beyond rated conditions, improper storage, negligence or accident; damage because of incorporated use of equipment with Goods, after Customer has or reasonably should have, knowledge of any defect; or improperly installed by any other Person that is unauthorized by DL Manufacturing. This warranty is subject to customer covenants to inform all subsequent buyers of the Goods of the limitation on and exclusive of warranties provided for herein. Customer hereby indemnifies and agrees to hold DL Manufacturing harmless from and against all losses, costs and expenses, including reasonable attorney's fees incurred by DL Manufacturing as a result of any third party claim relating to the purchase, sale or use of, or otherwise relating to, the Goods covered by this Agreement.

In no event shall DL Manufacturing be required to repair, replace or reimburse Customer for more than the part or material that is found to be defective and DL Manufacturing's liability shall in such event be no greater than the invoiced price of the item and shall not include labor, shipping or other costs incurred in connection with the reshipment of defective Goods to DL Manufacturing or the reinstallation of such Goods after any repair or replacement. The remedy set forth in this paragraph is expressly agreed to be the sole and exclusive remedy for any breach of warranty. This warranty is exclusive and in lieu of all other warranties expressed or implied, including but not limited to any warranty of merchantability or of fitness for a particular purpose.

Limitation of Liability - In no event as a result of breach of contract, warranty or negligence shall DL Manufacturing be liable for special, or consequential damages including but not limited to loss of profits or revenues, loss of any equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs or claims of purchasers of the Customer for such damages. Additionally, DL Manufacturing will not be liable for any delay in the performance of contracts and orders, or in the shipment and delivery of goods, or for any damage suffered by the Customer by reason of delay, when such delay is, directly or indirectly, caused by force majeure, including war, Government interference, strikes, embargoes, shortage of labor, fuel, fires, floods, or any other cause or cause whether or not similar in nature to any of those herein before specified beyond DL Manufacturing's control.