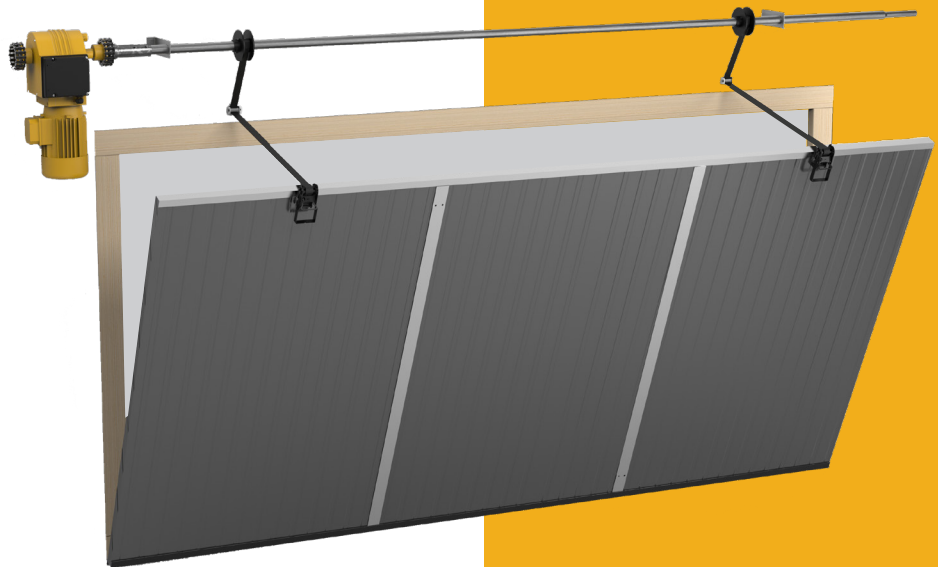




Pipe Driven Tunnel Door



INSTALLATION MANUAL

REV12042025

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1. GENERAL

1.1 INTRODUCTION

The Pipe Driven EcoTight Tunnel Door is used to seal off tunnel openings during the winter. It can be used for all animal husbandry or green houses. It is a modular system which allows us to customize the height and length of the system to meet your air flow or CFM needs. Before installing the tunnel door system we highly recommend that you carefully review this manual. Keeping it safely on hand for future reference will ensure that you can always access important information regarding operation, maintenance, and troubleshooting.

1.2 NOTES

Double L reserves the right to make alterations to specifications, quantities, dimensions, and other product details for production or other reasons after publication. While we strive to provide accurate and complete information, Double L makes no warranty or representation regarding the suitability of the product for any particular purpose.

It is essential that this manual is read and followed by all personnel involved in the system's operation, installation, and maintenance. This includes, but is not limited to, those responsible for: Operation including preparation, troubleshooting, and cleaning; Maintenance including servicing, inspection, and repair; and Deactivation including shutdown and disposal procedures.

1.3 DELIVERY CHECK

Before opening any boxes, carefully inspect the external packaging for any signs of damage. If any damage is found, contact your forwarding agent immediately before proceeding with unpacking. If the packaging appears safe, proceed to open the boxes. Carefully compare the contents of each box with the item list provided. Verify that the quantities and types of products match the list. If there are any discrepancies, such as missing or incorrect items, please contact Double L immediately for resolution. Retain all packaging and documentation until the issue is resolved. Please note that the boxes may contain small and numerous items that are easily lost. If the products are not being used immediately, do not open the boxes. Instead, keep them sealed and store them in a safe, dry, and secure location to prevent loss or damage. Retain all delivery documentation, including item lists, packing slips, and any communication with the forwarding agent or Double L. This will be essential in case of any future issues or claims.

1.4 SAFETY & WARNINGS

Danger: Electrical Hazard



Ground all electrical equipment for safety. All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes. Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

Personnel Requirements



This product must only be used by persons adequately trained in the hazards, dangers, and risks of the equipment.

All users of this product must be trained in the following areas:

- Health and safety hazards relating to use of this machine throughout its entire life cycle
- Devices provided for safety of the operator
- Instructions for safe shutdown in case of emergency

The customer must assume the following responsibilities:

- To provide necessary personal protective equipment required
- To ensure normal maintenance operations are carried out
- To provide necessary repair parts in a timely manner

Carefully read all safety messages in this manual and on your equipment safety signs. Follow recommended pre-cautions and safe operating practices. Keep safety signs in good condition. Replace missing or damaged safety signs.

1. 5 LIMITED WARRANTY

Double L Group, LLC ("Double L") warrants new Double L EcoTeight Tunnel Door System manufactured by Double L to be free from defects in material or workmanship under normal usage and conditions, for One (1) year from the date of purchase ("Warranty"). Double L does not cover the cost of labor; therefore, installation issues as well as repair costs are not applicable or covered under a warranty claim. If such a defect is determined by Double L to exist within the applicable period, Double L will, at its option, (a) repair the Product or Component Part free of charge, F.O.B. the factory of manufacture or (b) replace the Product or Component Part free of charge, F.O.B. the factory of manufacture. This Warranty is not transferable, and applies only to the original purchaser of the Product.

Conditions and Limitations

THIS WARRANTY CONSTITUTES DOUBLE L'S ENTIRE AND SOLE WARRANTY AND DOUBLE L EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES. DOUBLE L shall not be liable for any direct, indirect, incidental, consequential or special damages which any purchaser may suffer or claim to suffer as a result of any defect in the Product. Consequential or Special Damages as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs, and operational inefficiencies. *Some jurisdictions prohibit limitations on implied warranties and/or the exclusion or limitation of such damages, so these limitations and exclusions may not apply to you. This warranty gives the original purchaser specific legal rights. You may also have other rights based upon your specific jurisdiction.*

Compliance with federal, state and local rules which apply to the location, installation and use of the Product are the responsibility of the original purchaser, and DOUBLE L shall not be liable for any damages which may result from non-compliance with such rules.

The following circumstances shall render this Warranty void:

- Modifications made to the Product not specifically delineated in the Product manual.
- Product not installed and/or operated in accordance with the instructions published by Double L.
- All components of the Product are not original equipment supplied by Double L.
- Product was not purchased from and/or installed by a Double L authorized distributor or certified representative.
- Product experienced malfunction or failure resulting from misuse, abuse, mismanagement, negligence, alteration, accident, or lack of proper maintenance, or from lightning strikes, electrical power surges or interruption of electricity.
- Product experienced corrosion, material deterioration and/or equipment malfunction caused by or consistent with the application of chemicals, minerals, sediments or other foreign elements.
- Product was used for any purpose other than for the care of poultry and livestock.

The Warranty and Extended Warranty may only be modified in writing by an officer of Double L. Double L shall have no obligation or responsibility for any representations or warranties made by or on behalf of any distributor, dealer, agent or certified representative.



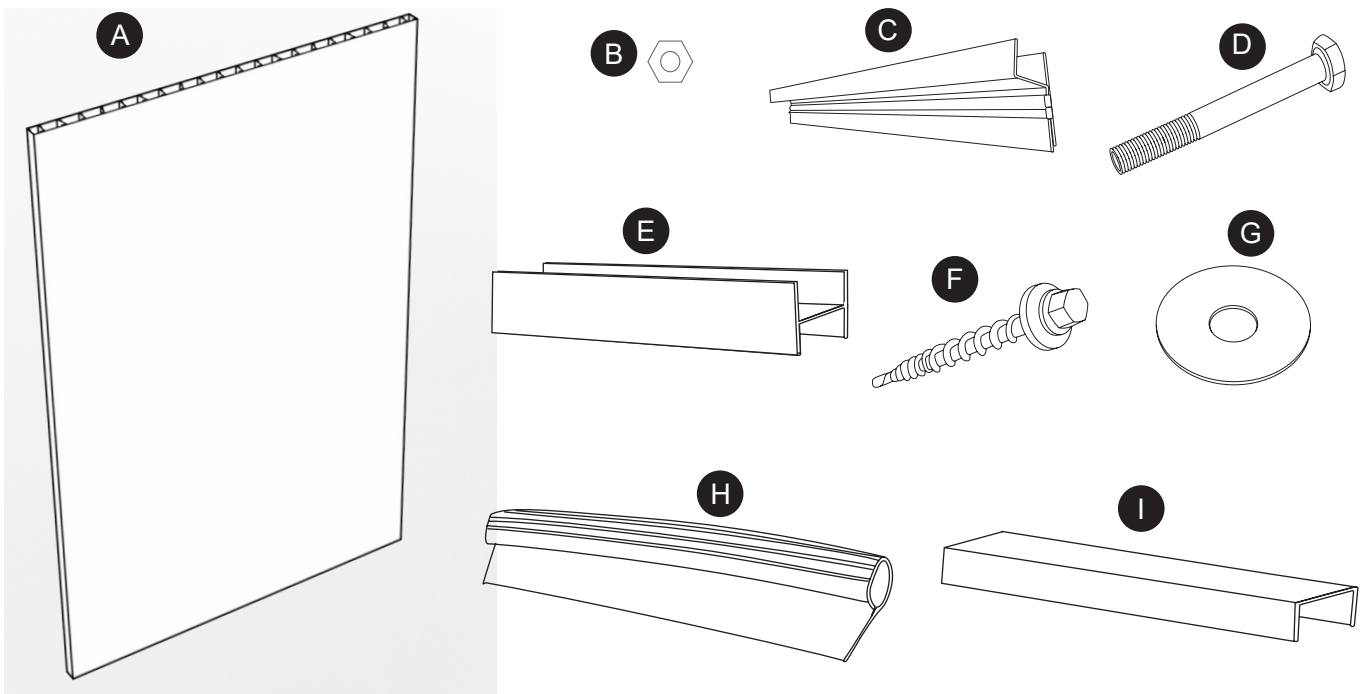
1.6 PARTS LIST

TOOLS NEEDED:

- Tape Measure
- Level
- 9/32" Drill Bit
- 1/4" Drill Bit
- String Chalk Reel
- Cordless Drill with Phillips Driver
- Rubber Mallet
- 7/16" socket and wrench
- 5/16" shallow socket
- 1/4" shallow socket
- Roofing Nails
- Roofing Nail Gun (Recommended)
- Caulk (Recommended)
- Marker

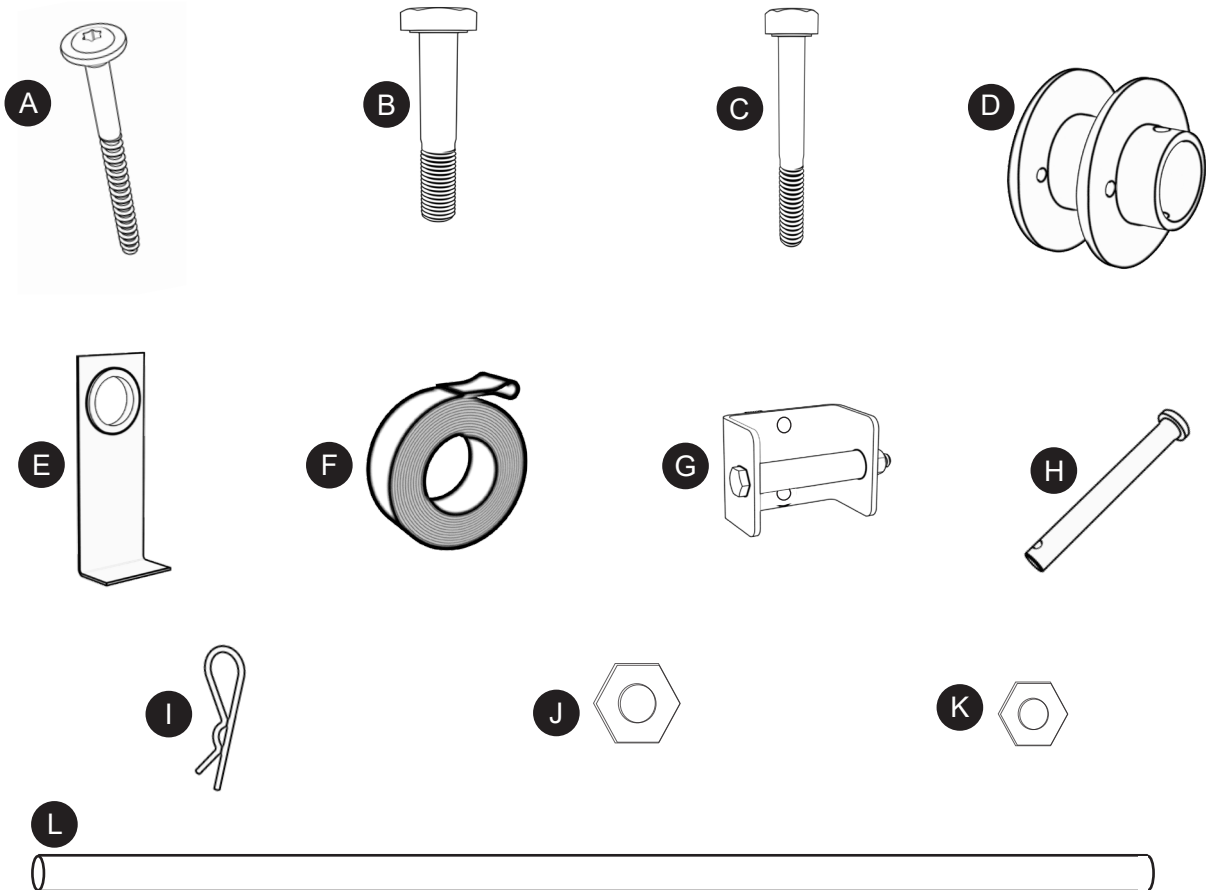
Door Install Kit- Part #31102W

	Part #	Description	QTY./KIT
A	031050	Tunnel Door Panel, Gray, 5' x 3'	1
B	600003BO	1/4" SS Nut	2.2
C	031030	Continuous Hinge	3.33 ft.
D	031038	1/4" x 2" SS Bolt	2.2
E	031077	PVC H-Channel	1
F	031013	#10 x 1" Roofing Screw	18
G	600006WA	1/4" Washer	1.1
H	031054	1.2"H x 1.8"W P-Seal	3.33 ft.
I	031072	PVC U-Channel	3.33 ft.



Pipe Drive Kit- Part #31104/31105

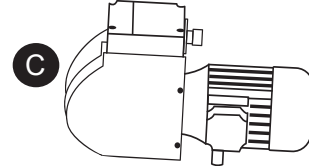
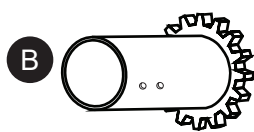
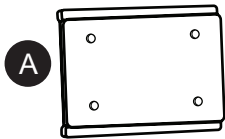
	31104	31105	Description	QTY./KIT
	KIT:	KIT:		
A	031066	031066	1/4"x2" Flat Head Wood Screw	2.5
B	031016	031016	5/16" x 1-1/2" SS Bolt	0.5
C	031038	031038	1/4" x 2" SS Bolt	0.5
D	031060	031060	Pipe Drive Spool	0.5
E	031043	031049	Bronze Bushing Bracket, Right Angle	0.66
F	031061	031061	Pipe Drive Belt	0.5
G	031068	031068	Roller Guide Assembly	0.5
H	031064	031064	1/4" x 2" Clevis Pin	0.5
I	031065	031065	Cotter Pin	0.5
J	031017	031017	5/16" Nut	0.5
K	090061	090061	1/4" Lock Nut	0.5
L	031070	031070	1" x 10ft Pipe	0.33





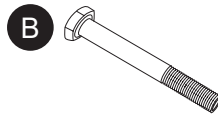
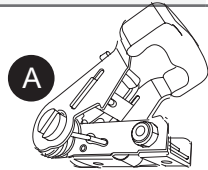
Winch Kit- Part #31112/31119

	31119	31112	Description	QTY./KIT
	KIT:	KIT:		
A	017009	017009	Ecocode300 Mounting Bracket	1
B	031042	031042	1" Tube Sprocket	2
C	17005	17003	Ecocode300	1



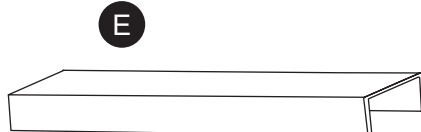
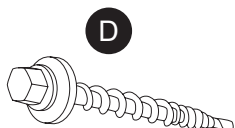
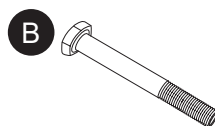
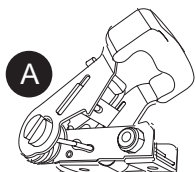
Tunnel Door Lift Kit- Part #31103

	Part #	Description	QTY./KIT
A	031002	1" Ratchet Strap	1
B	031038	1/4" x 2" SS Bolt	1
C	300003BO	1/4" SS Nut	1



Tunnel Door End Kit- Part #31102

	Part #	Description	QTY./KIT
A	031002	1" Ratchet Strap	1
B	031038	1/4" x 2" SS Bolt	2
C	300003BO	1/4" SS Nut	2
D	031013	#10 x 1" Roofing Screw	8
E	031072	PVC U-Channel	10ft.
F	031054	1.2"H x 1.8"W P-Seal	10 ft.



2. ASSEMBLY

2.1 FRAMING ROUGH OPENING

***Note:** Tunnel door opening (framing) should be flat and straight in the vertical and horizontal planes.

Step 1

Prepare to measure out the rough opening, this should be 1.5" less than the door height on the top and 3" less than the door length for the width. (See Figure 1)

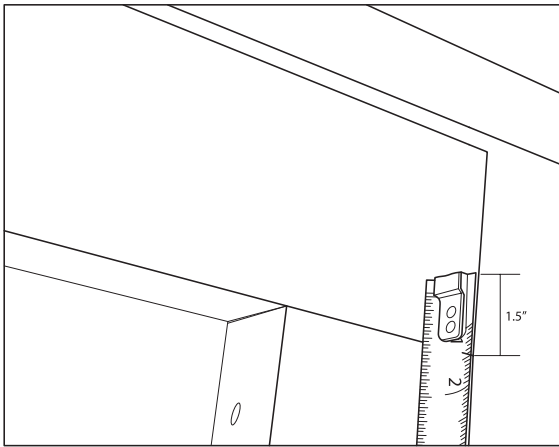
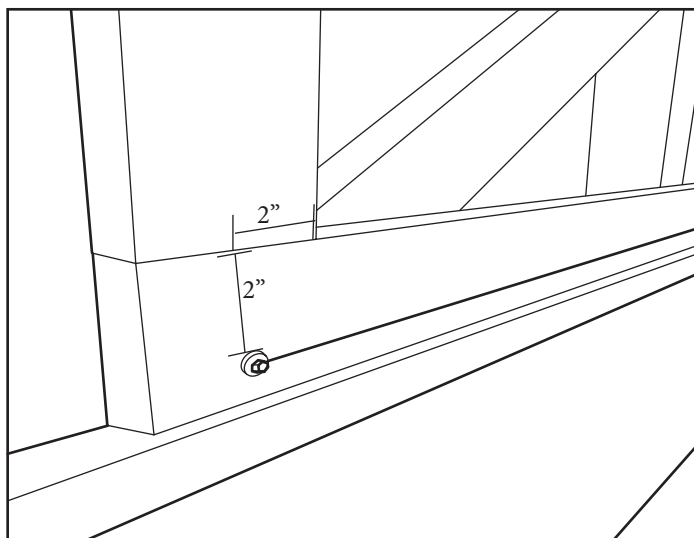


Figure 1.



Step 2

Snap a chalk line 2" from the top of the bottom board of the rough opening for continuous hinge placement. (Needs to be at a level tolerance of $\pm 1/4$ " from end to end.)

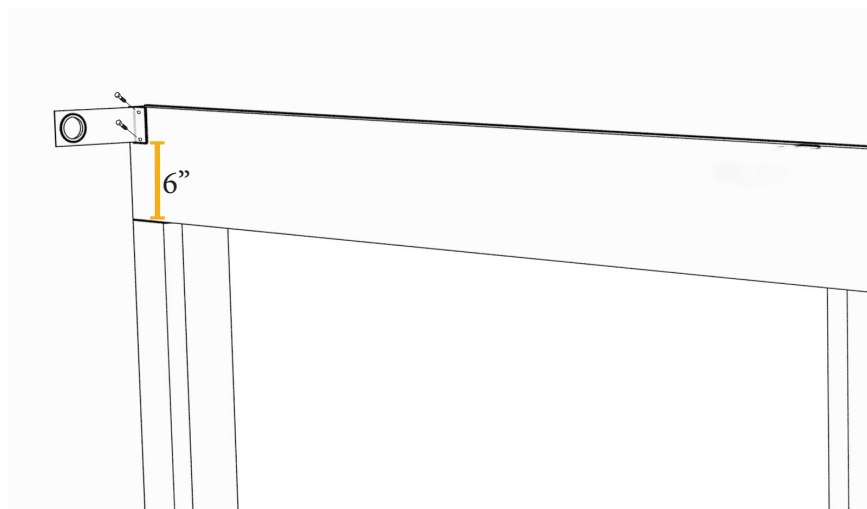




2.2 BRONZE BUSHING INSTALLATION

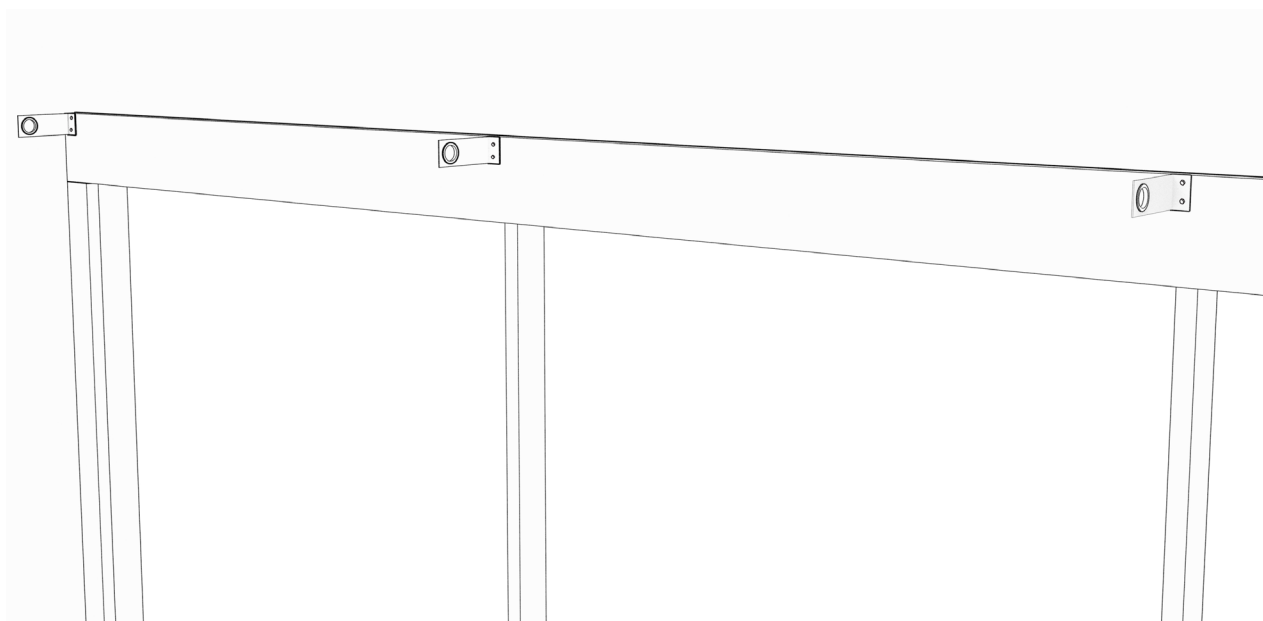
Step 1

At the start of the system secure a bronze bushing to the wall with (2) 1/4" x 2" Wood Screws This should be placed where the **bottom of the bracket is 6" above the top of the Rough Opening.**

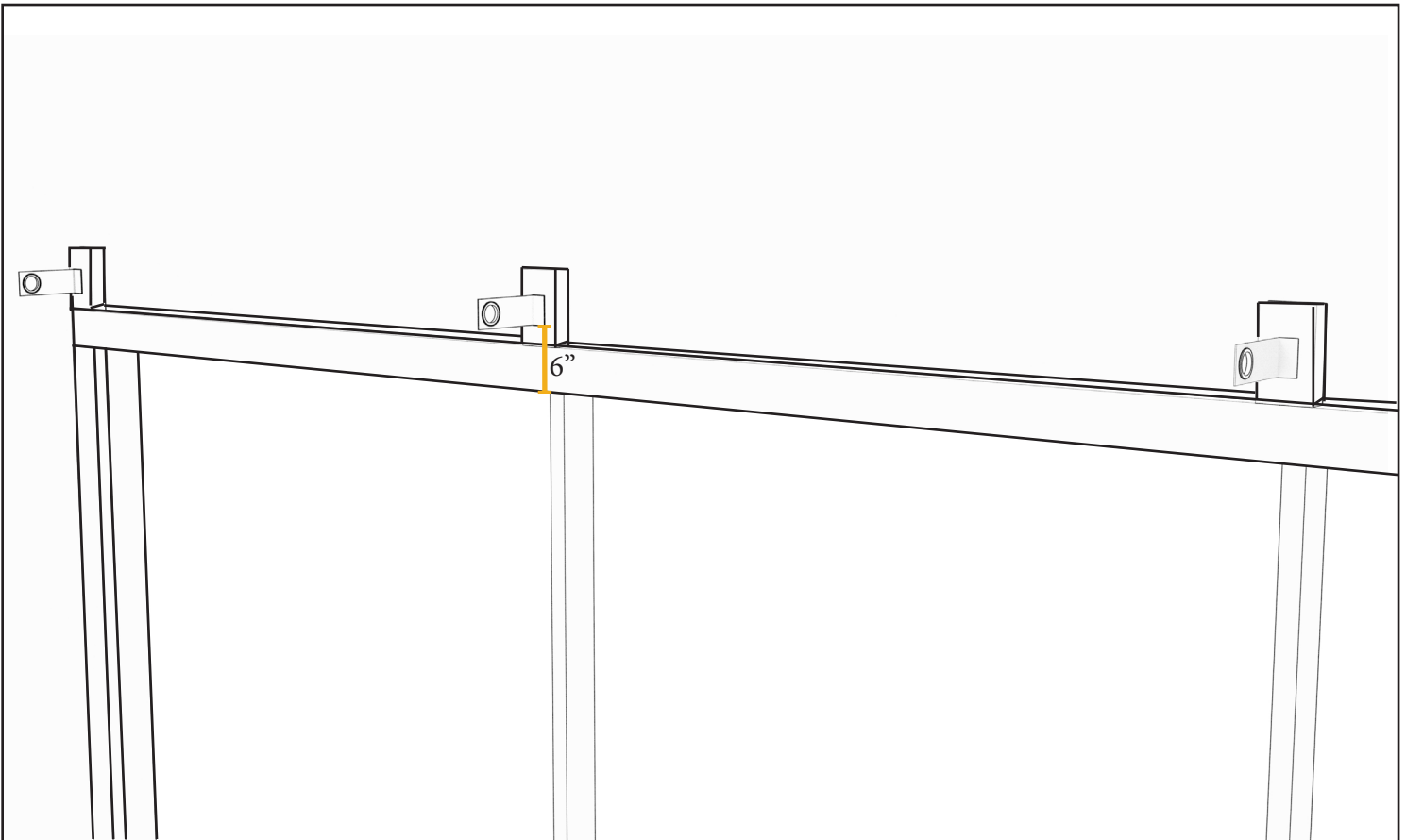


Step 2

Continue installing a bronze bushing at every 5ft. on center throughout the system using (2) roofing screws for each bracket.



Note: If top of framing is smaller than a 2x8, add blocking to create the correct height for Bronze Bushing Brackets as shown.



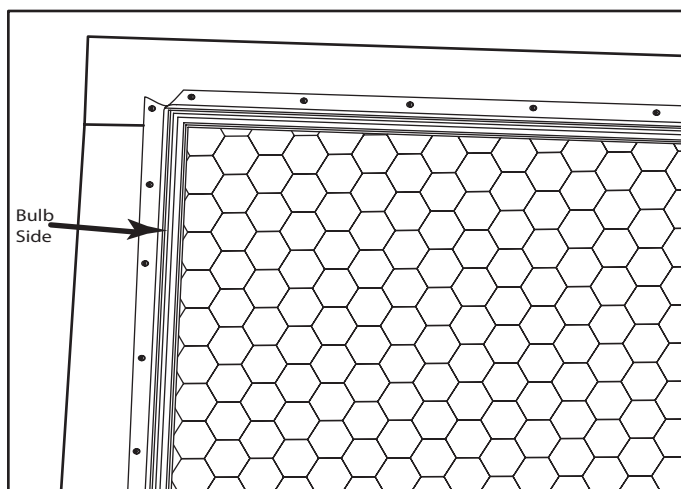


2.3 P-SEAL INSTALLATION

Hardware Not Included: Roofing Nails to install P-Seal

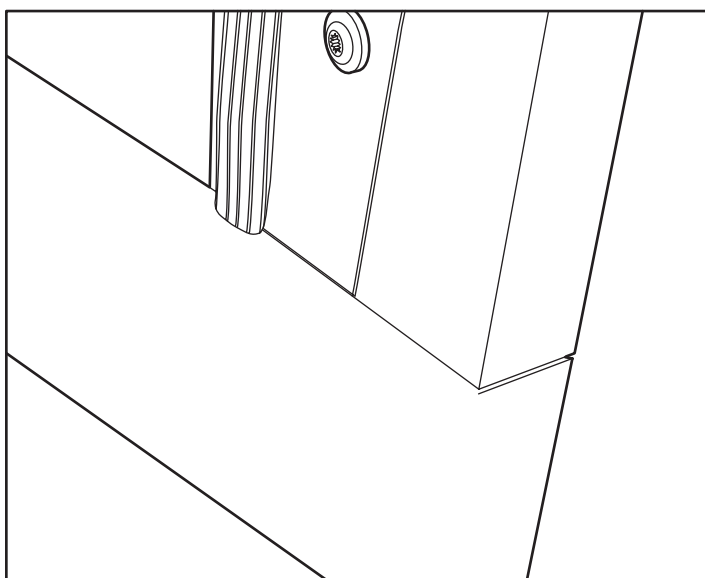
Step 1

Align the P-Seal on the rough opening with the bulb closest to the opening and secure with Roofing Nails. Miter the seal as needed to wrap around the corner on a continuous piece.



Step 2

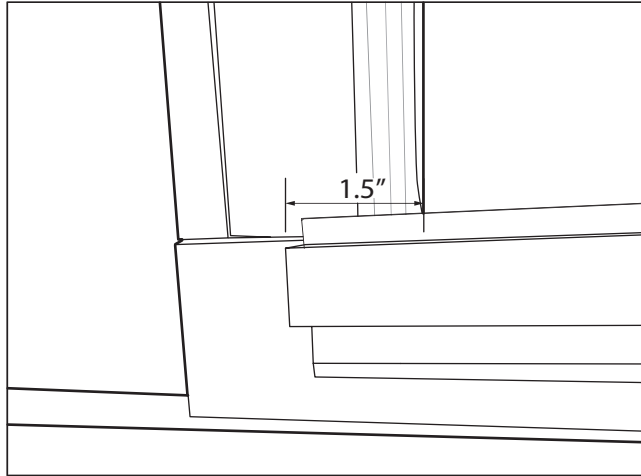
P-Seal should start and end at the bottom of the rough opening.



2.4 DOOR INSTALLATION

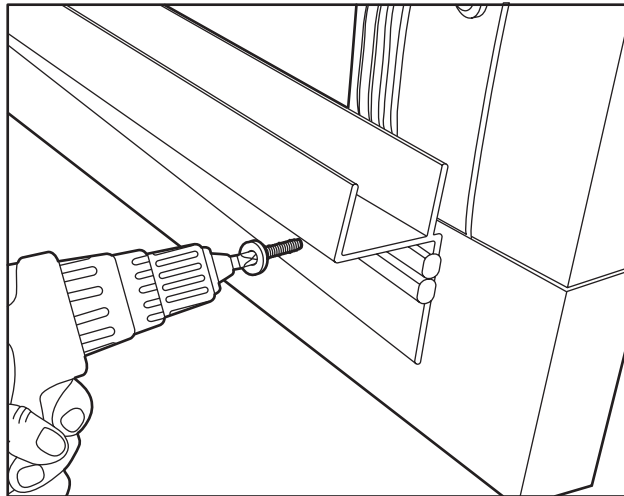
Step 1

Measure 1 - 1½" past the opening on both sides for the start of the continuous hinge.



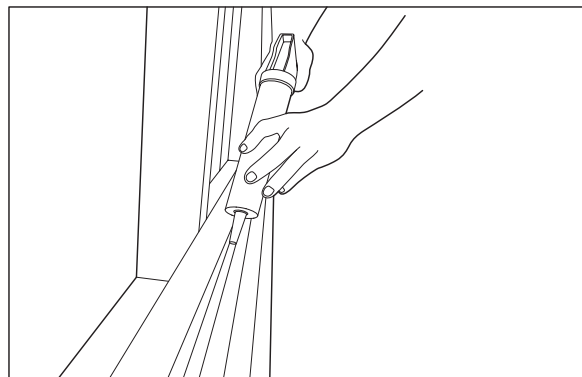
Step 2

Install continuous hinge with (10) 1" roofing screws per 10ft. piece so the bottom is aligned with the chalkline that was snapped.



Step 3

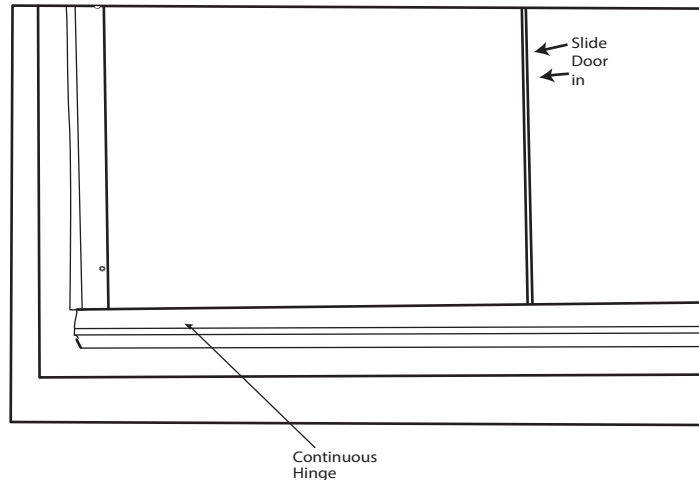
Flex the hinge into the house and place a bead of caulk below the flexible portion of the hinge between the hinge and framing.





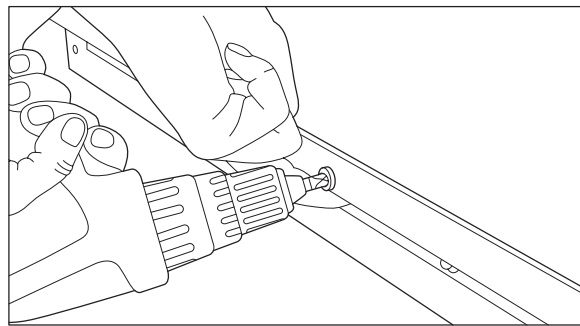
Step 4

Start installing the 1st door on the side closest to the winch. Slide the door into the hinge and ensure it is flush with the hinge on the end of the system.



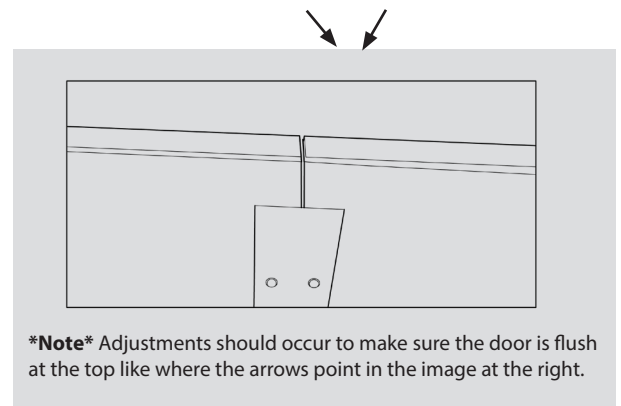
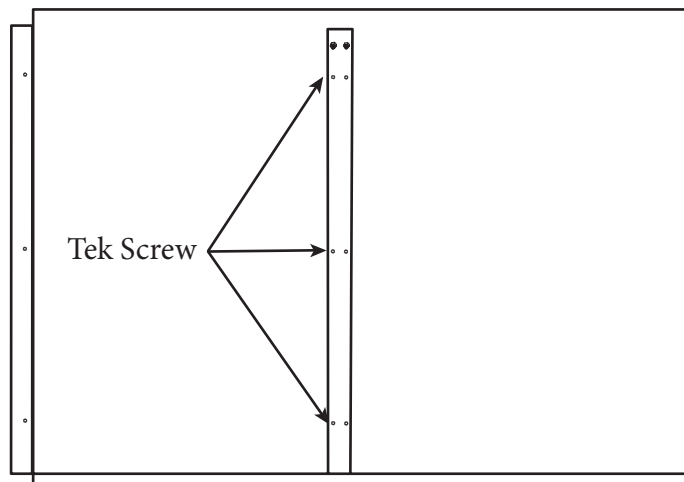
Step 5

Use 1" roofing screws to secure the door to the hinge. Secure with 3 roofing screws per door.



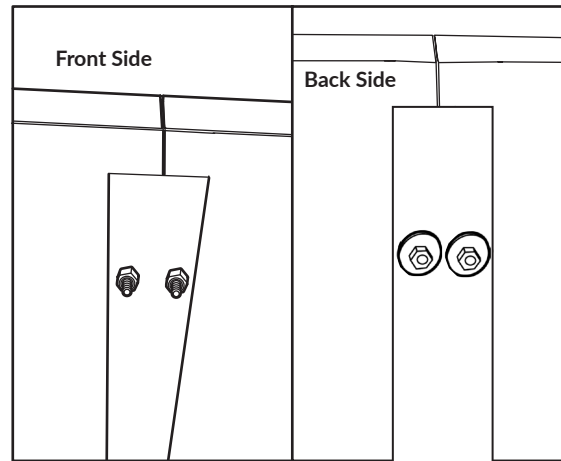
Step 6

Slide one side of the PVC H-Channel onto the already secured panel. Next, slide another panel into the continuous hinge. Tap the bottom of the door with a rubber mallet to ensure its flush with the other side of the PVC H-Channel. Secure the both pannels together with 6 evenly spaced roofing screws.



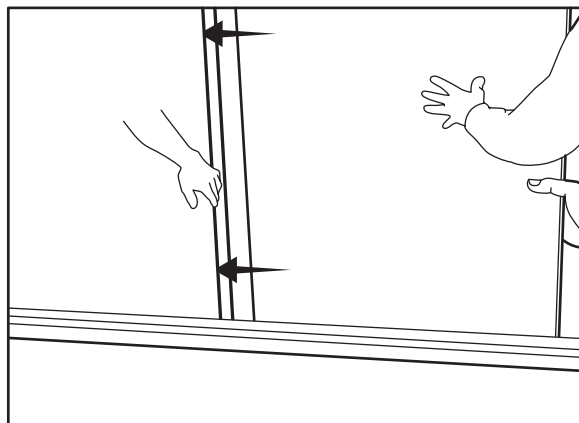
Step 7

Measure 3" down from the top of the H-Channel and drill two clearance holes through the door and both sides of the channel with a $\frac{3}{32}$ bit. Bolt them together with (2) 1/4" bolts, washers, and nuts.



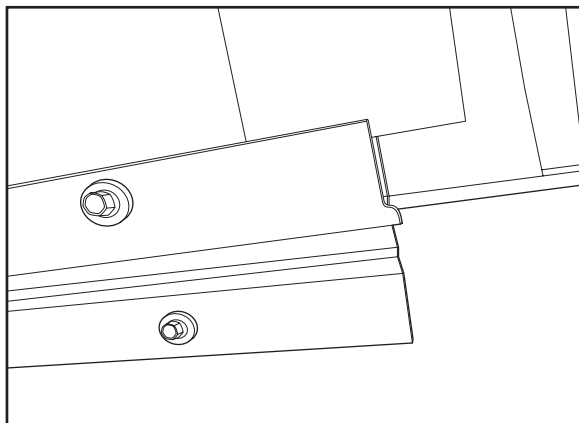
Step 8

Repeat steps 5 through 7 for the remaining doors.



Step 9

The last panel can overlap the rough opening as much as needed but utilize a circular saw to cut the final door to size if needed.

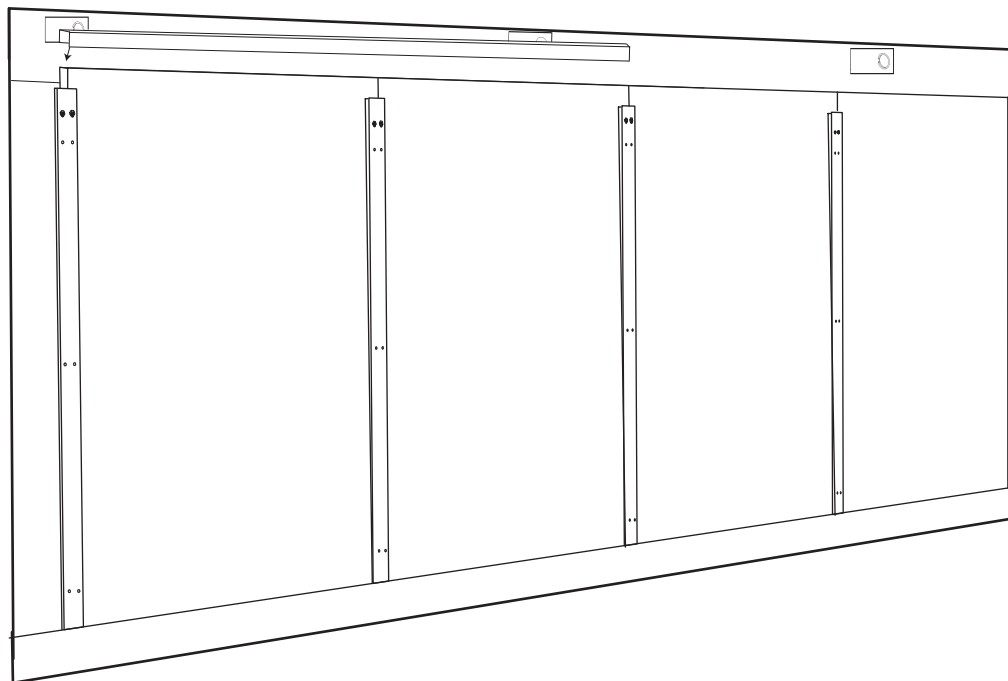




2.5 INSTALLING PVC U-CHANNEL

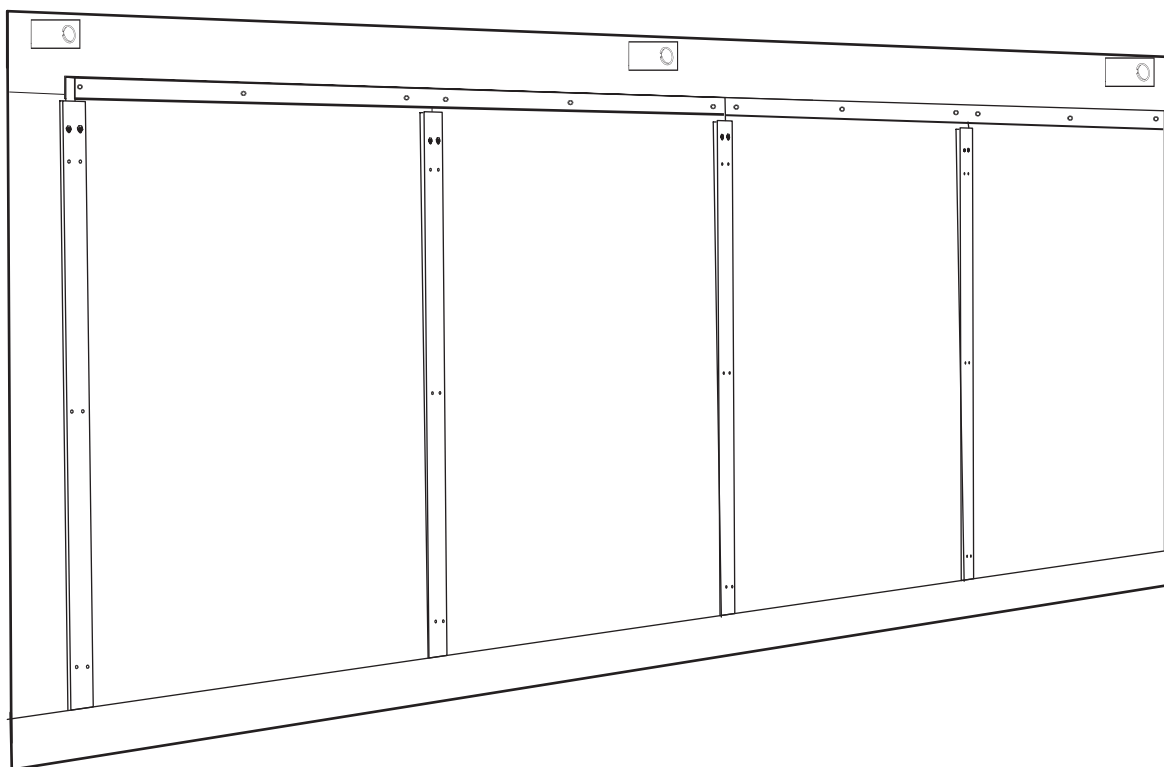
Step 1

Starting at the end with the first door you installed, insert a PVC U-Channel at the top making sure it is flush at the end. Using a rubber mallet tap the channel onto the top of the door.



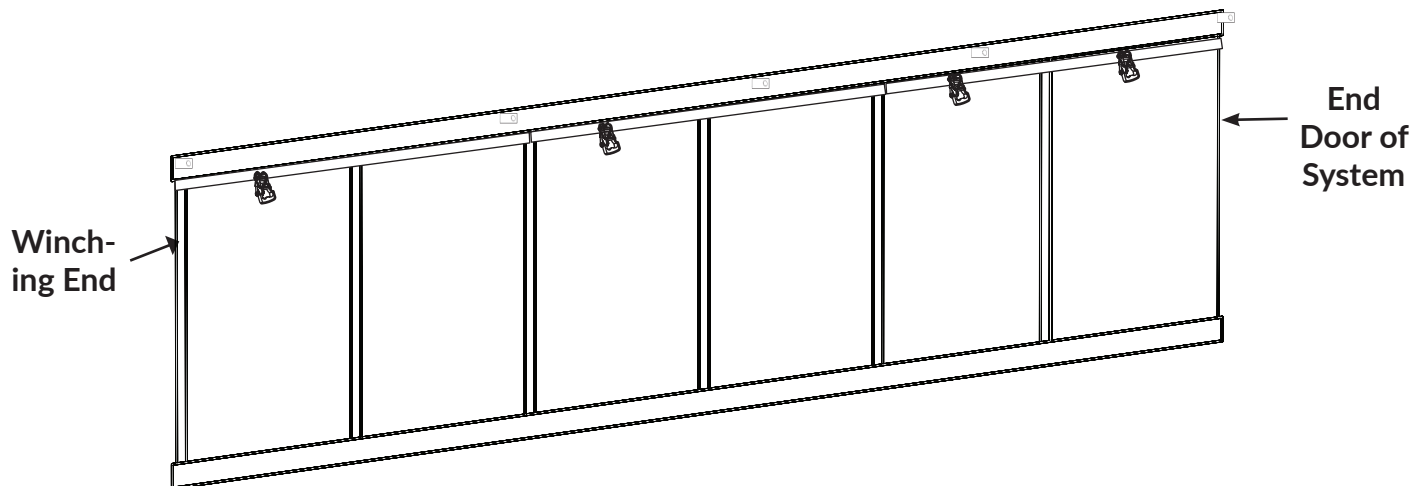
Step 2

Continue adding on the PVC C-Channel to the rest of the systems doors with each piece flush against the previous. Cut off any excess channel that extends over the end of the system. Secure all of the PVC channeling with 3 evenly spaced roofing Screws per door.



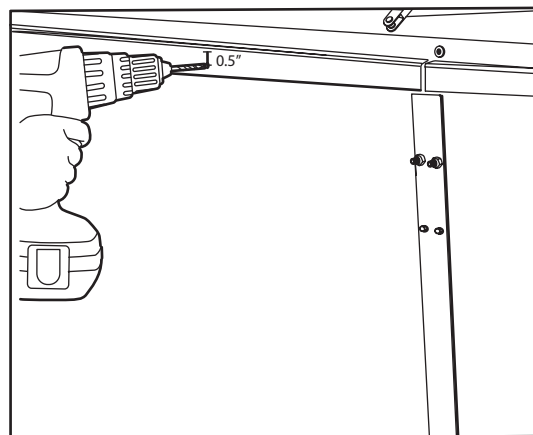
2.6 INSTALLING RATCHET SYSTEM

Install a ratchet to every other door at the center of the door with the exception of the end doors. First ratchet placement should be on the door closest to the winching. (See figure below for placement)



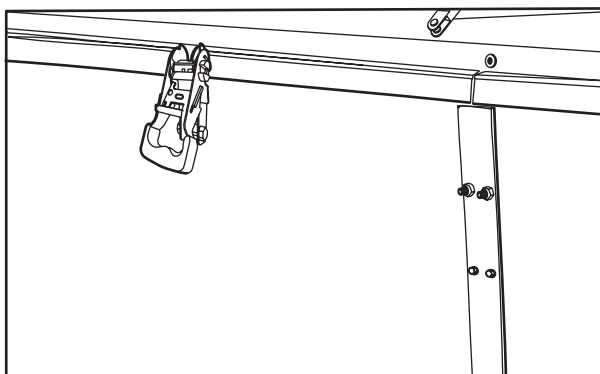
Step 1

Drill a hole $\frac{1}{2}$ " down from the top of the door into the PVC U-Channel.



Step 2

Bolt ratchet through pre-drilled hole in the PVC U-Channel.



Tunnel Door Lift Kit Part #31103

A. Ratchet for 1" Webbing

B. 1/4" SS Nut

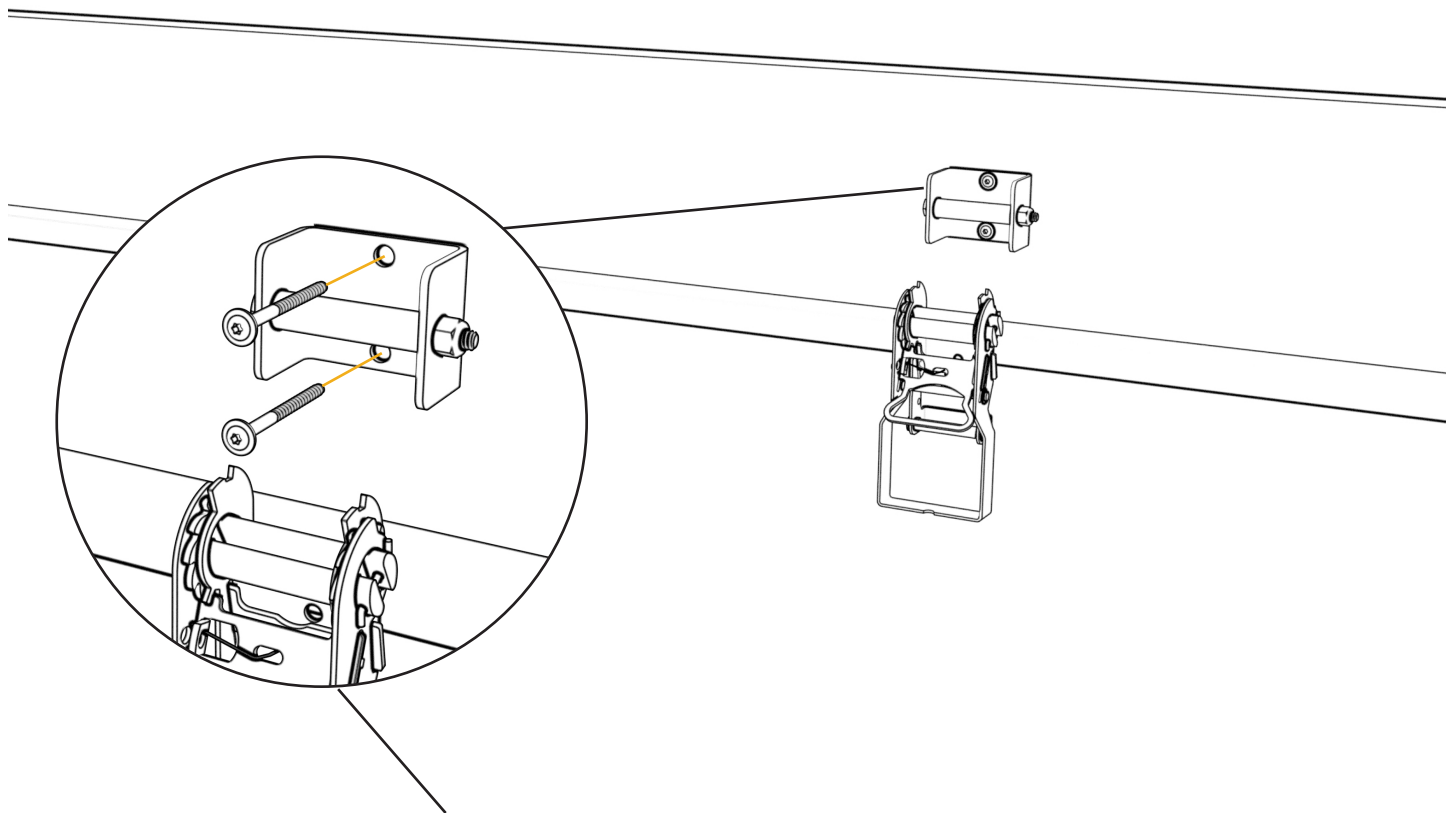
C. 1/4"-20 x 2" Bolt



2.7 INSTALLING ROLLER GUIDE

Step 1

Place a Roller Guide on the system framing at each ratchet location. Secure the Roller Guide bracket using 2 washer head wood screws, directly behind the ratchet so the bottom of the bracket is 2" up from the rough opening.



Note: Be sure that the bracket is **ALIGNED** directly behind the ratchet.

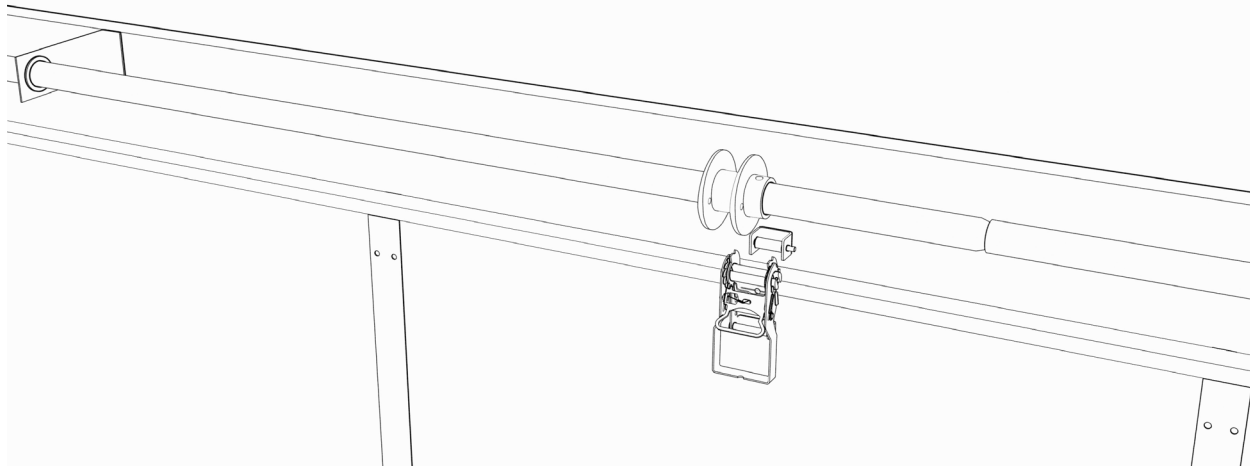
Step 2

Repeat step 1 for each ratchet in the system.

2.8 INSTALLING PIPE DRIVE

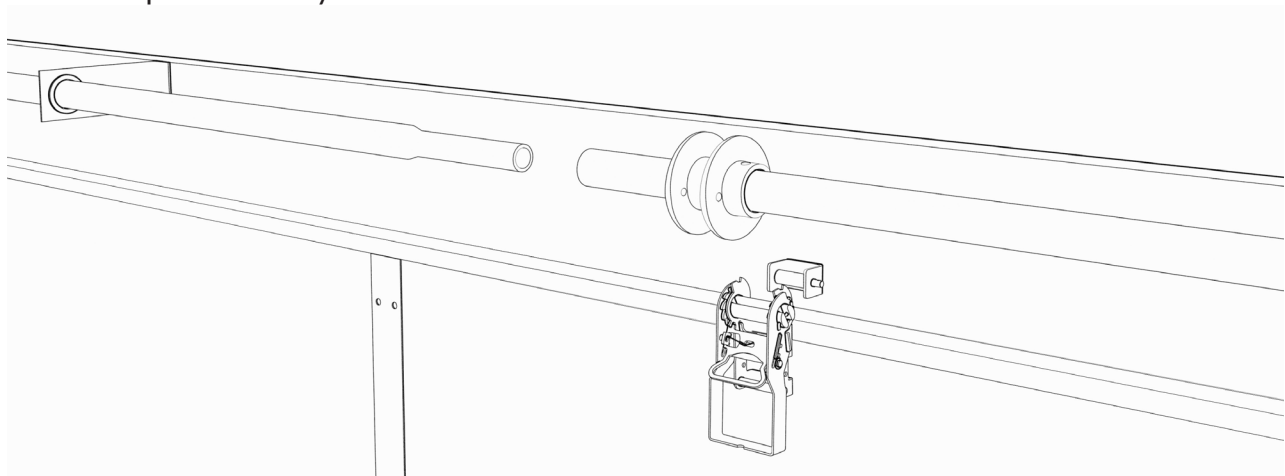
Step 1

Slide the Pipe sections through the Bronze bushings while at the same time placing a spool onto the non-swaged end of the pipe. The spool should be located at every Ratchet installed on the doors in the system. The swaged end of the Pipe needs to point in the opposite direction from where the winch will be mounted.



Step 2

Continue adding the next pipe to the system by inserting the swaged end of one pipe into the non-swaged end of the other. Secure the pipes together with (1) 5/16" Bolt and 5/16" Nut. Before sliding the other end of the second pipe into the bronze bushing be sure to add on the spool to align with the ratchets in that part of the system.



Note: DO NOT SECURE SPOOL with bolt before attaching Winch to system

Step 3

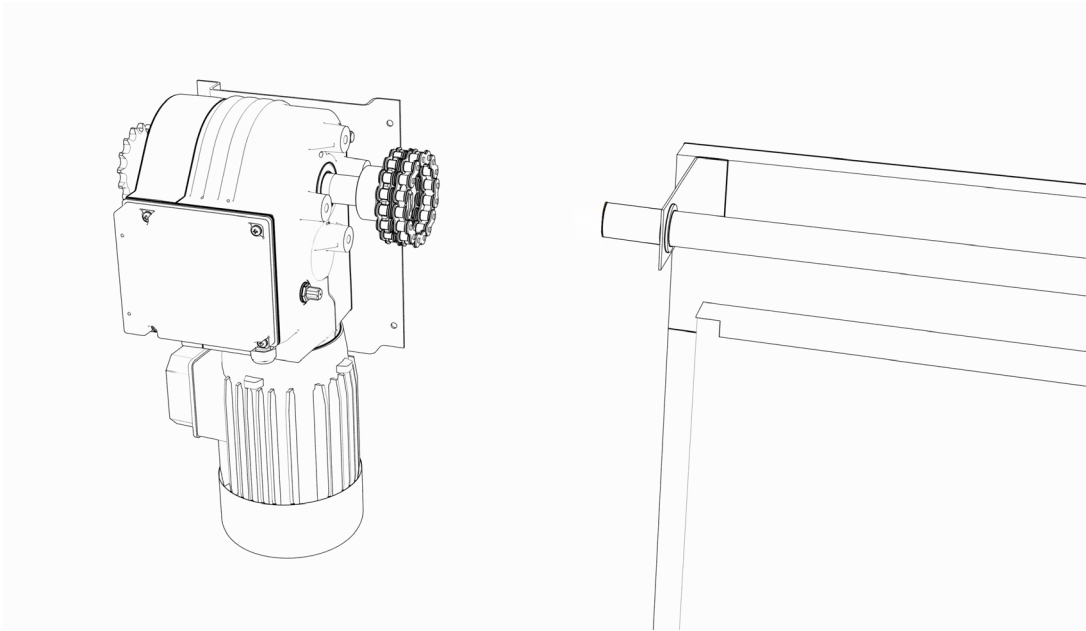
Repeat steps 1 and 2 until there is piping for the entire system and a spool at each ratchet. Spools will be secured in place after winch is installed.



2.9 INSTALLING WINCH

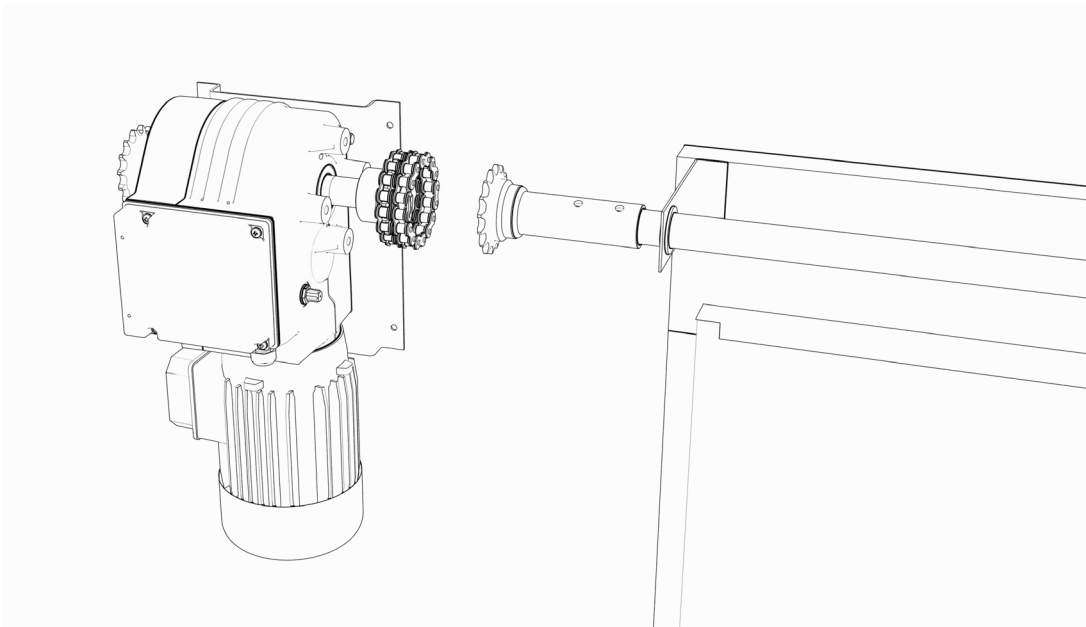
Step 1

Install the EcoDrive 300 with the (4) M10 Bolts it comes with to the Actuator Mounting bracket. Then attach the actuator and mounting bracket to the wall with (4) 5/16" x 3-1/8" Wood Screws. This should be placed where the top of the actuator bracket is even with the framing and it is 6" away from the frame. Additional blocks may be needed to offer more support.



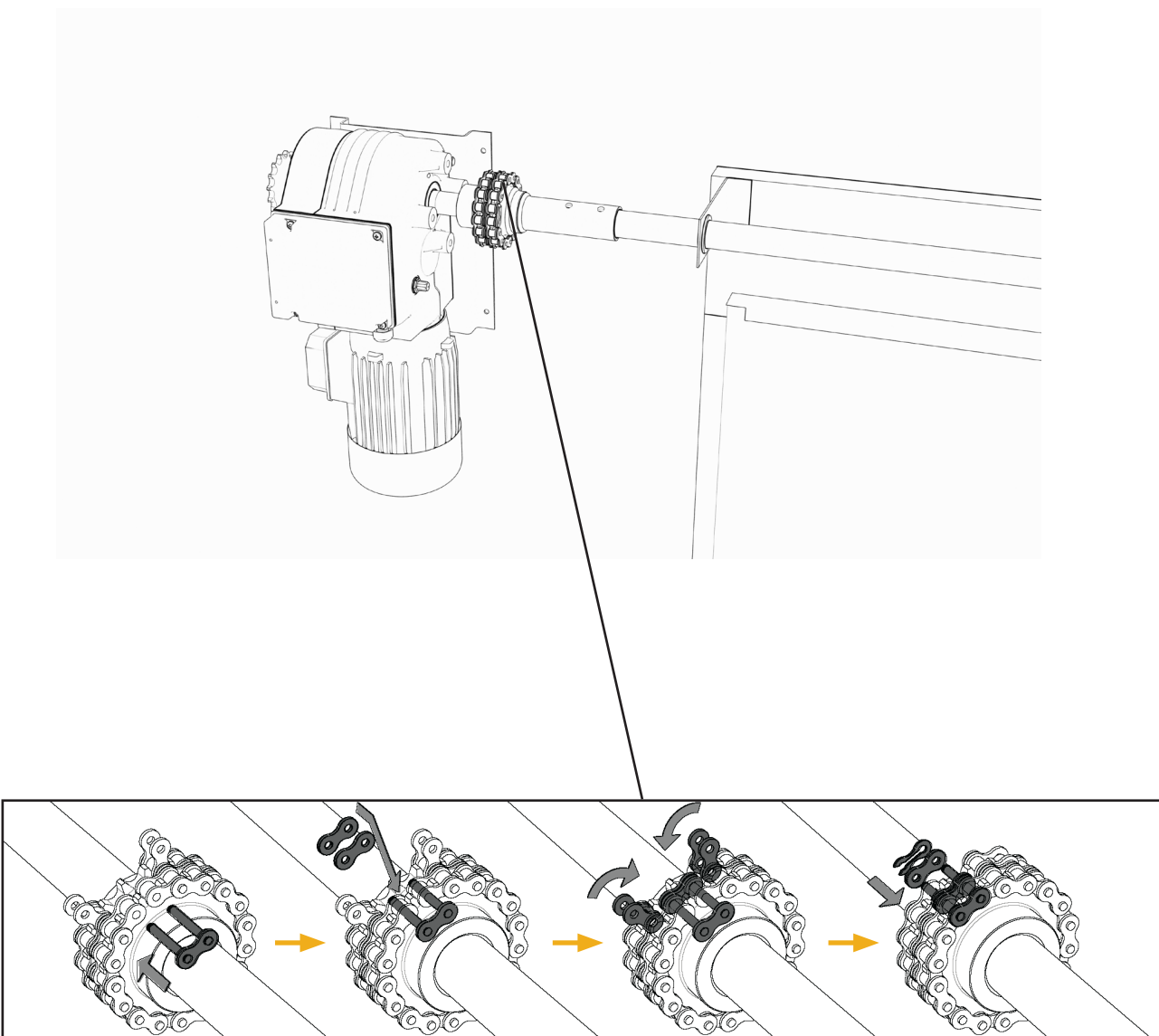
Step 2

Find the end of the piping that is closest to the winch and install a Tube Sprocket. Using the two pre drilled holes in the Tube Sprockets as a guide, drill a $\frac{13}{32}$ " dia. hole through the piping. Secure the Tube Sprockets onto the ends by placing (2) 5/16" bolts and 5/16" nuts in the pre drilled holes.



Step 3

Attach the Tube Sprocket on the piping to the Mounted winch using the supplied worm gears. See the diagram below for how to attach gears.

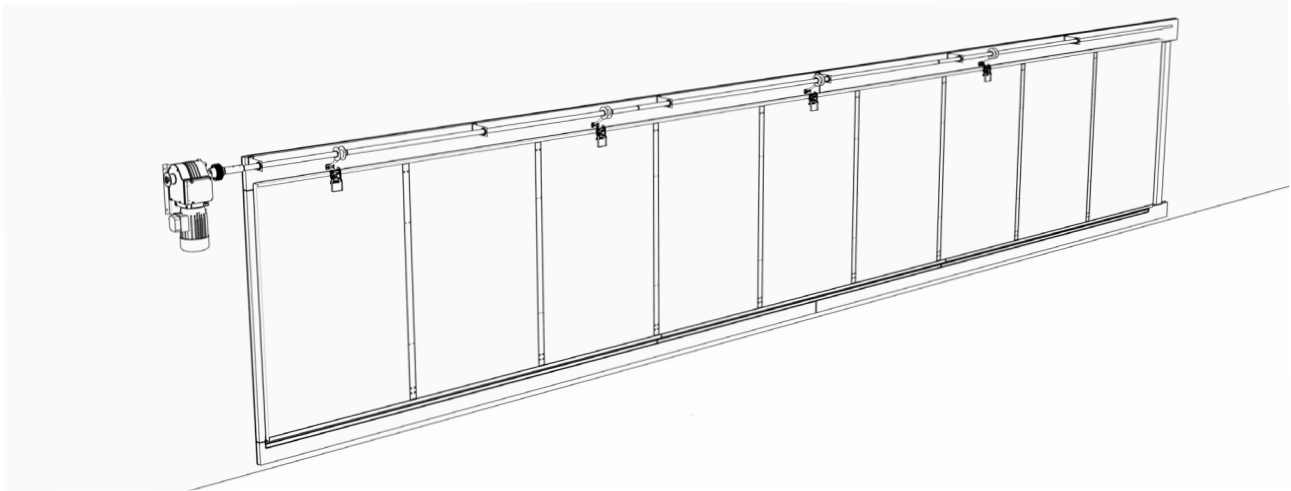




2.10 INSTALLING SPOOLS/BELTS

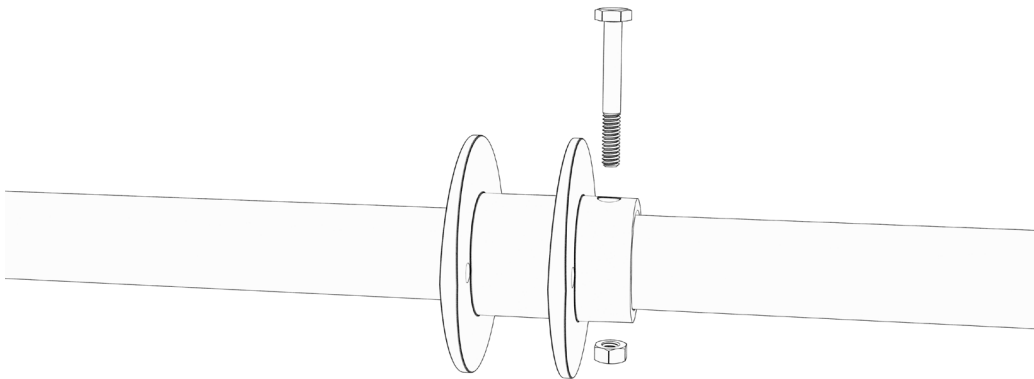
Step 1

Go through the entire system and ensure the spools are in line with each ratchet.



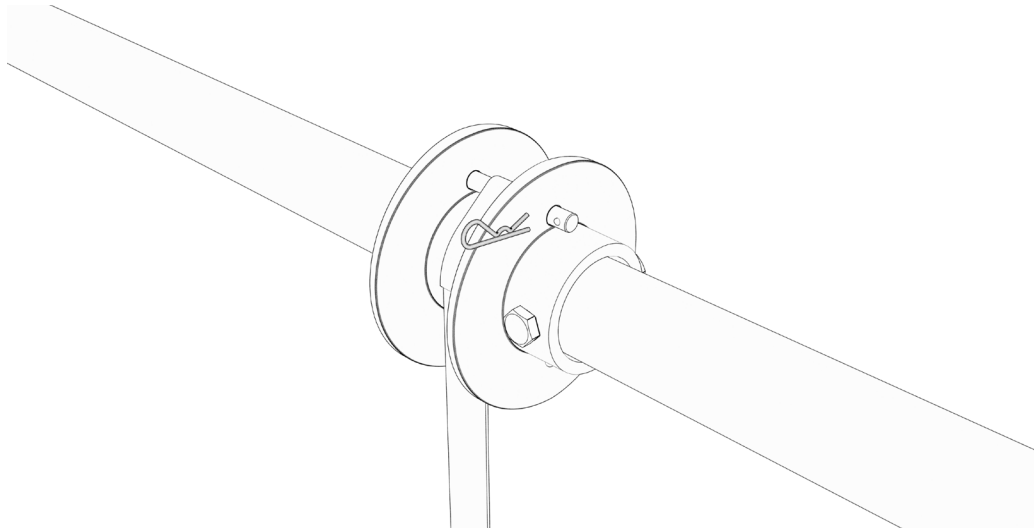
Step 2

Using the holes in the spool as a guide, drill a 1/4" hole into the galvanized piping. Once these holes are drilled secure the spools to the pipe with (1) 1/4" x 2" bolt and 1/4" nut.



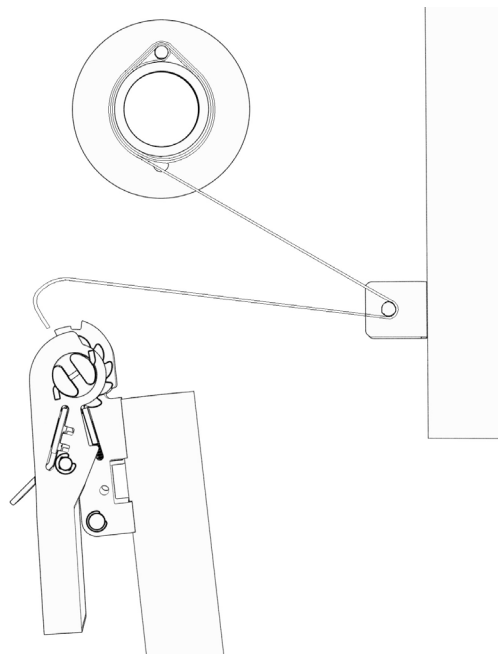
Step 3

Attach the belts to the spools by inserting a clevis pin through the loop at the end of the belt. Use a cotter pin to secure in place.



Step 4

Reel the belt up on the spool a few times leaving enough length for tightening with the ratchet later. With rest of the belt feed it through the roller bracket and ratchet. Once the belt is through both of these tighten it on the ratchet to secure in place.



Step 5

Continue steps 3 and 4 for the rest of the system until every spool kit has a strap installed then tighten ratchets for an even seal on the door.



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