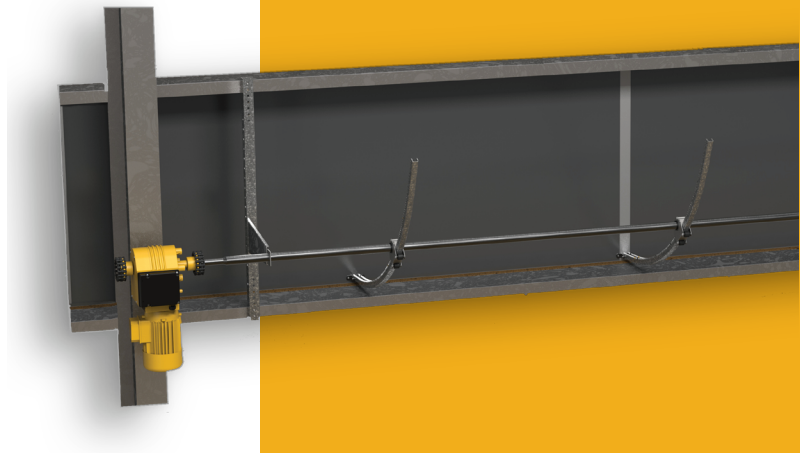




EcoTight Sidewall Rack & Pinion



INSTALLATION MANUAL

REV11122025

CONTENTS

1. GENERAL

1.1 Disclaimer	3
1.2 Introduction	3
1.3 Delivery Check	3
1.4 Safety & Warnings	4
1.5 Limited Warranty	5
1.6 Parts List	6

2. ASSEMBLY

2.1 Framing	9
2.2 P-Seal Installation	10
2.3 Door Assembly	11
2.4 Installing Aluminum Channel	16
2.5 Mounting Bracket for Rack	17
2.6 Galvanized Pipe Install	19

1. GENERAL

1.1 INTRODUCTION

Our EcoTight Sidewall Rack & Pinion is meticulously engineered to deliver optimal performance and efficiency. Designed with heavy duty aluminum gears it provides maximum sealing to reduce cold air leakage and allows for smooth continuous control of vent systems while minimizing maintenance needs.

Before installing the EcoTight Sidewall Rack & Pinion, 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

Warning



This product has inherent dangers, which can cause damage or loss to persons or equipment if the warnings in this manual are not adhered to. Please read and follow all instructions.

General Requirements



Carefully read all safety messages in this manual and on your equipment safety signs. Follow recommended precautions 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 EcoTight Sidewall Rack and Pinion 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 installation by the original purchaser ("Warranty"). Double L provides for an extension of the aforementioned Warranty period ("Extended Warranty Period") with respect to certain Product parts ("Component Part") as set forth in the table below. 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.

Component Part	Extended Warranty Period

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.

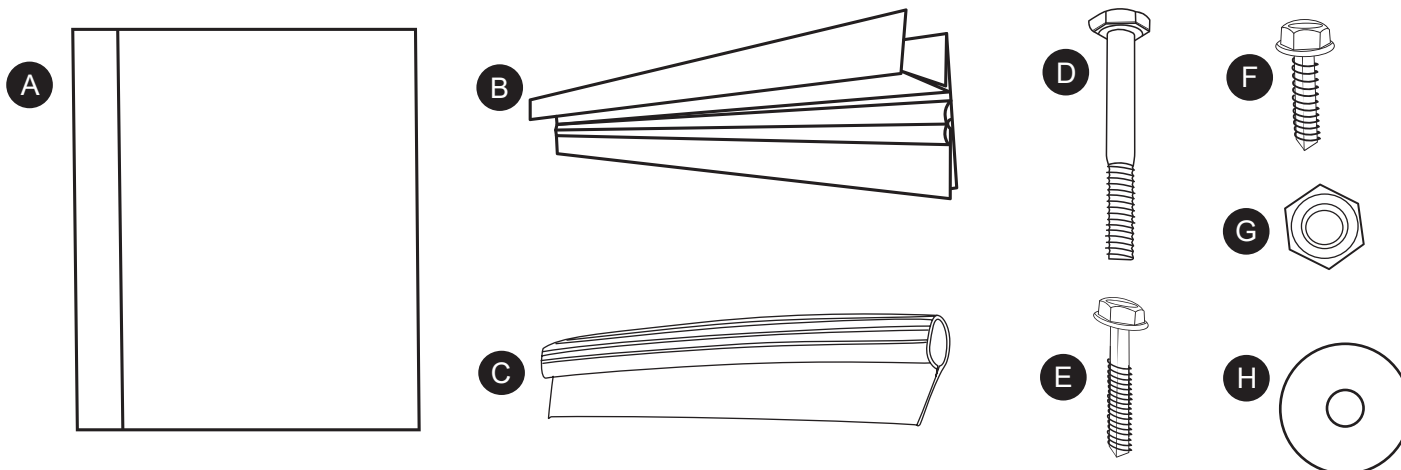
The Warranty and Extended Warranty may only be modified in writing by an officer of Double L. Double L shall have no obligation or responsibility for any representations or warranties made by or on behalf of any distributor, dealer, agent or certified representative.



1.6 PARTS LIST

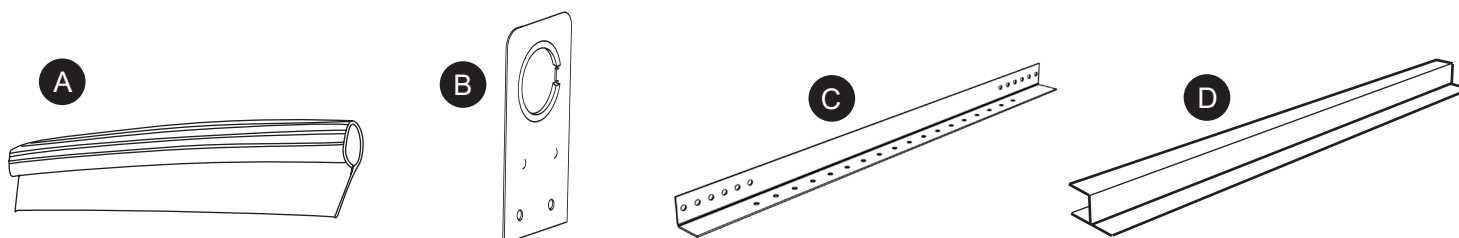
Door Install Kit- Part #31110/31116

	Part #	Description	QTY.
A	VARIES	Door Assembly	1
B	031030	Continuous Hinge	VARIES
C	031054	P-Seal	VARIES
D	031038	1/4" x 2-1/4" Bolt	2
E	031013	#10x1" Roofing Screw	VARIES
F	031012	#10x3/4" Tek Screw	6
G	600003BO	1/4" Nut	2
H	600006WA	1/4"ID x 1-1/4"OD Fender Washer	1



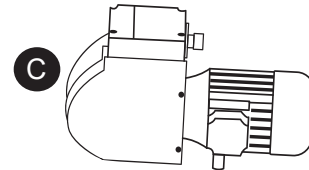
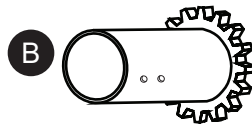
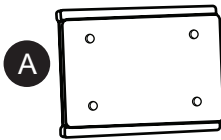
Side Wall End Kit- Part #31111

	Part #	Description	QTY./KIT
A	031054	P-Seal	5ft.
B	031053	Bronze Bushing	1
C	031031	Angle Iron -Mounting	1
D	90129	Baby-h	1



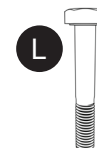
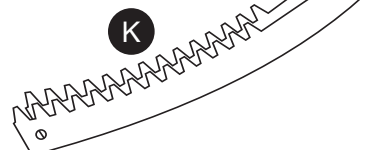
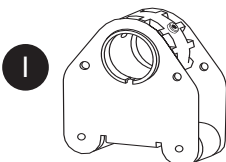
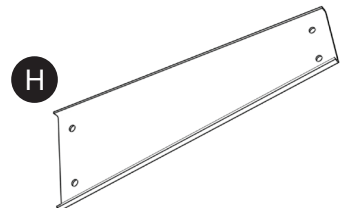
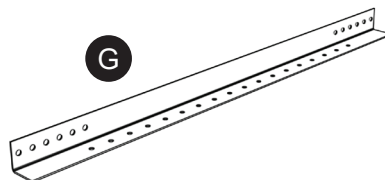
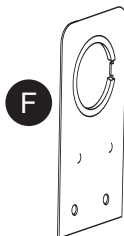
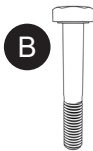
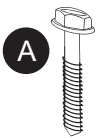
Winch Kit- Part #31112/31119

	Part #	Description	QTY./KIT
A	017009	Ecodrives300 Mounting Bracket	1
B	031042	1" Tube Sprocket	2
C	VARIES	Ecodrives300	1



Flush/Offset Mount R&P Kit- Part #31113/31117

	Part #	Description	31113	31117
			QTY.	QTY.
A	031013	#10x1" Roofing Screw	4	4
B	031016	5/16"x1-1/2" Bolt, SS	2	2
C	031017	5/16" Nut, SS	2	2
D	031020	1" Pipe -10.5ft.	1	1
E	031043	Bronze Bushing, Right Angle	2	0
F	031053	Bronze Bushing	0	2
G	031031	Angle Iron -Mounting	0	2
H	031032	Bushing Bracket Offset	0	2
I	031025	Pinion	2	2
J	031015	Rack to Door Mounting Bracket	2	2
K	VARIES	Rack	2	2
L	031038	1/4"x2-1/4" Bolt, SS	1	1
M	600003BO	1/4" Nut, SS	1	1





Tools Needed

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

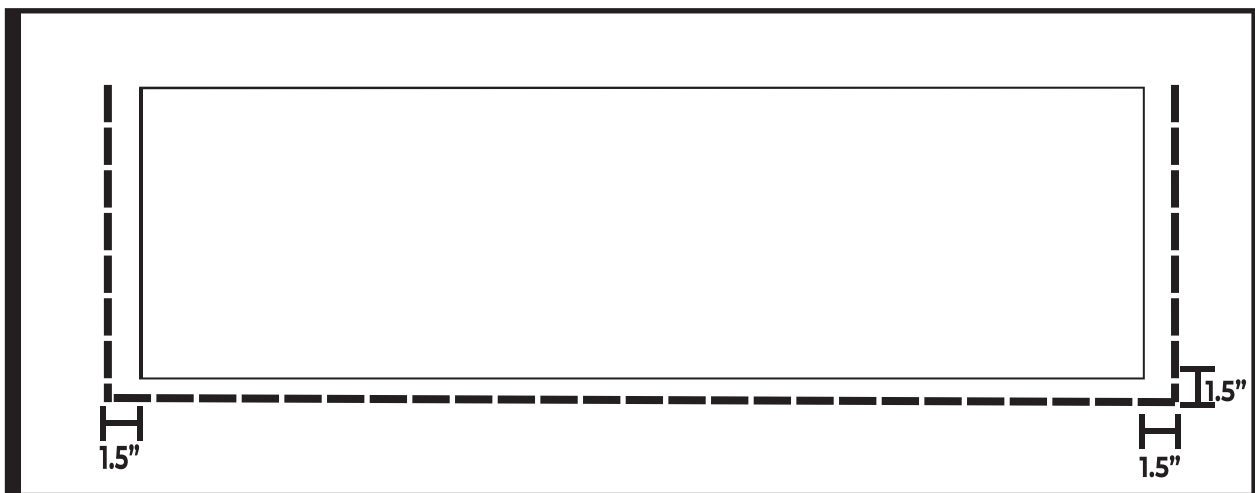
2. ASSEMBLY

2.1 FRAMING

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

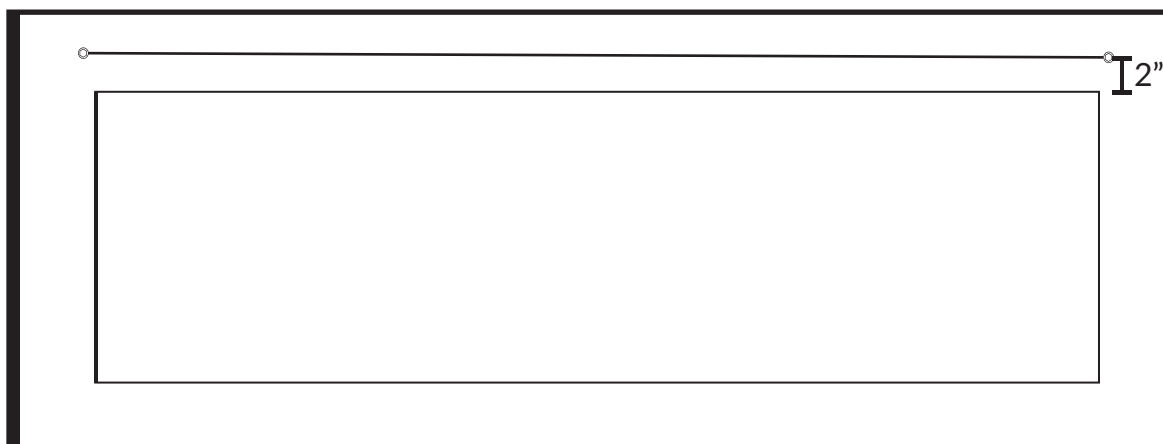
Step 1

Frame the rough opening according to the size of your Sidewall Door. The opening should be 1.5" less than the door height and 3" less than the total door width.



Step 2

Next, snap a chalkline 2" from the top of the rough opening for continuous hinge placement. This needs to be level with a tolerance of $\pm 1/4$ " from end to end.



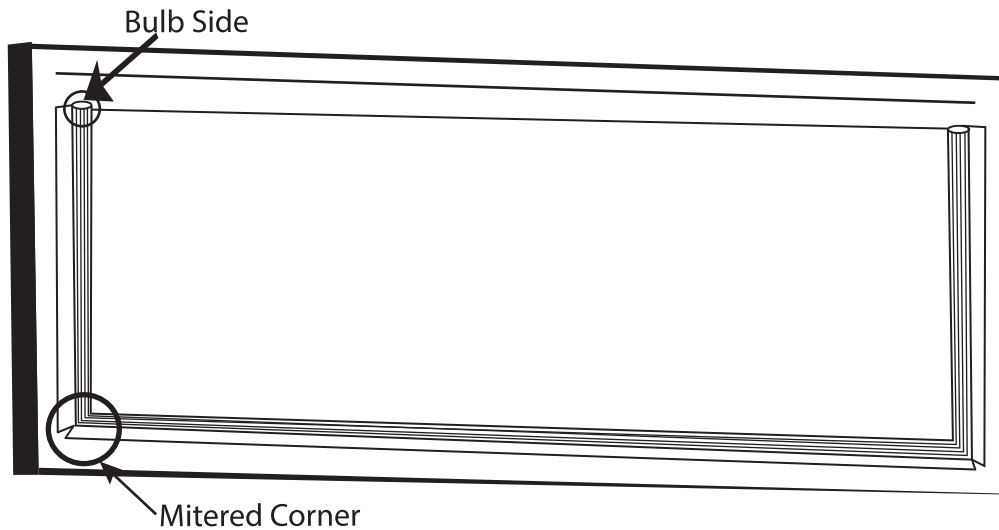


2.2 P-SEAL INSTALLATION

Note: Roofing Nails not included

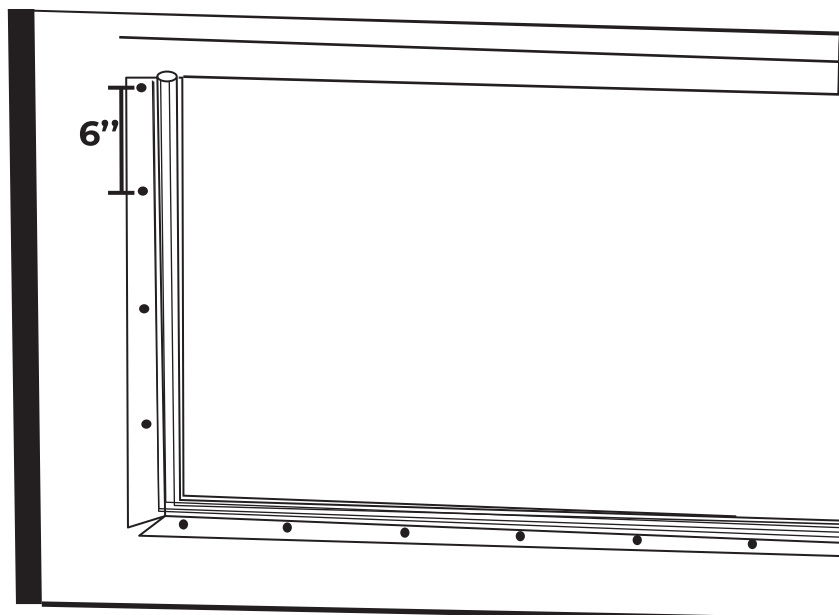
Step 1

Starting at the top on the left side, align the P-Seal to the rough opening with the bulb closest to the inside opening. Miter the seal as needed to wrap around corners with a continuous piece.



Step 2

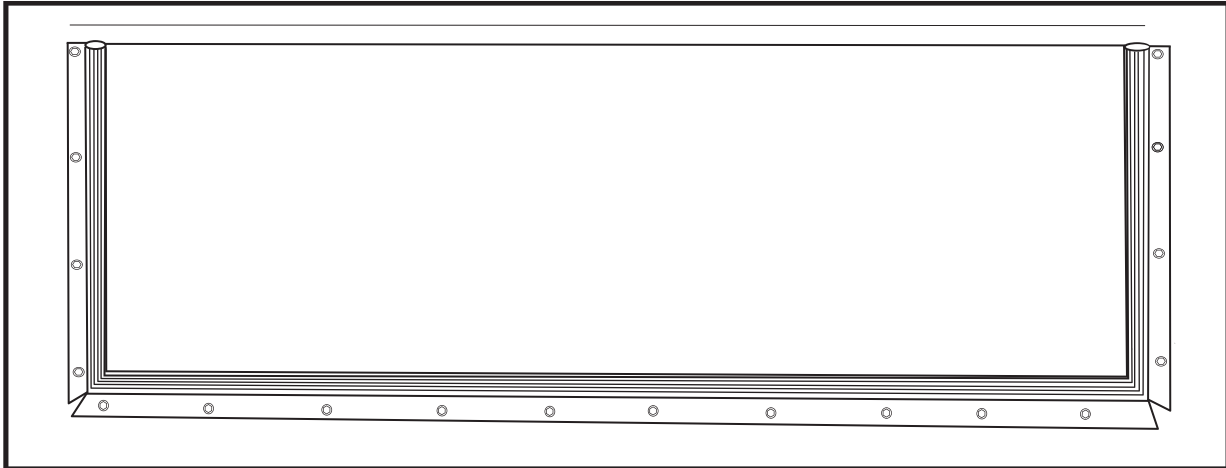
Continue attaching the p-seal until it is attached to 3 sides of each rough opening. After attaching the p-seal, go back and permanently secure it to the framing using roofing nails every 6".



2.3 DOOR ASSEMBLY

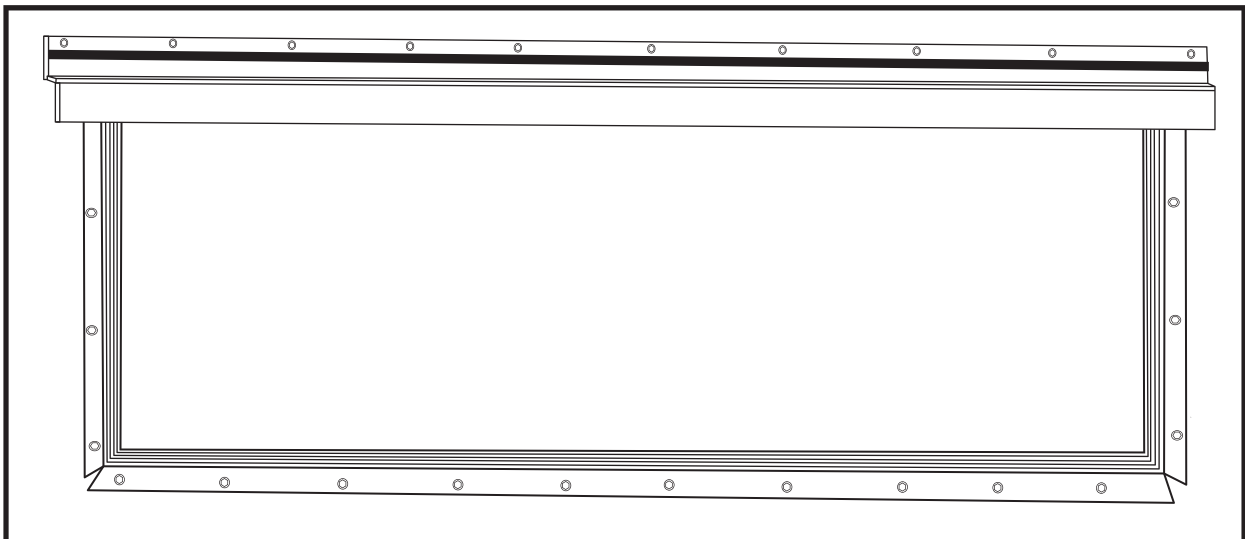
Step 1

On the top where you snapped the chalkline, measure 1-1/2" past the opening on both sides for the start of the continuous hinge.



Step 2

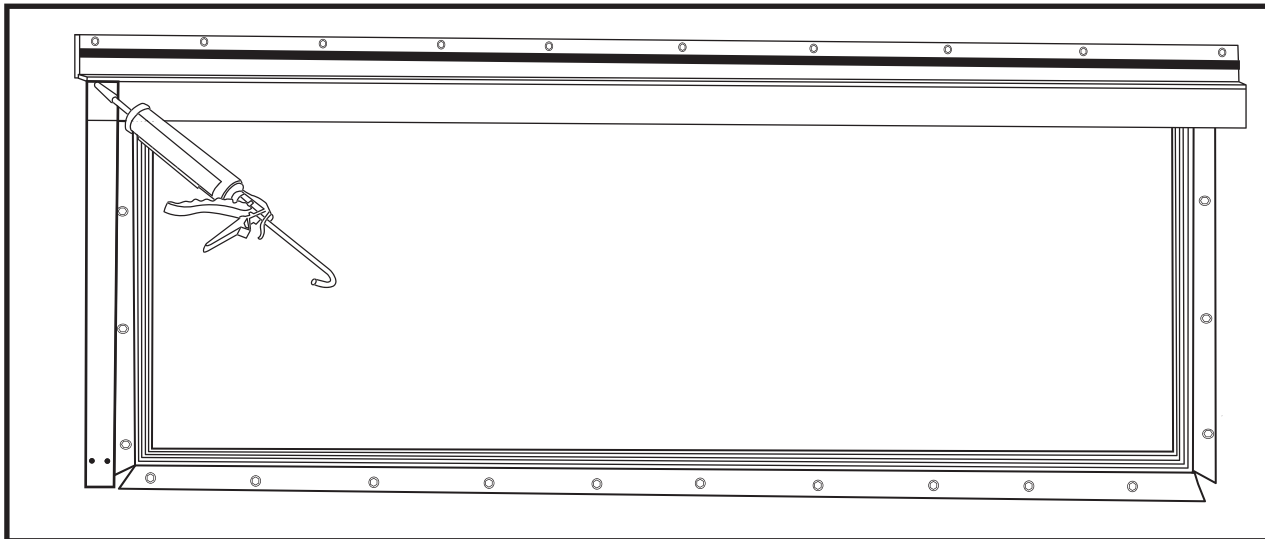
Install the continuous hinge with 1" screws every 12 inches, so the bottom is aligned with the chalkline that was snapped.





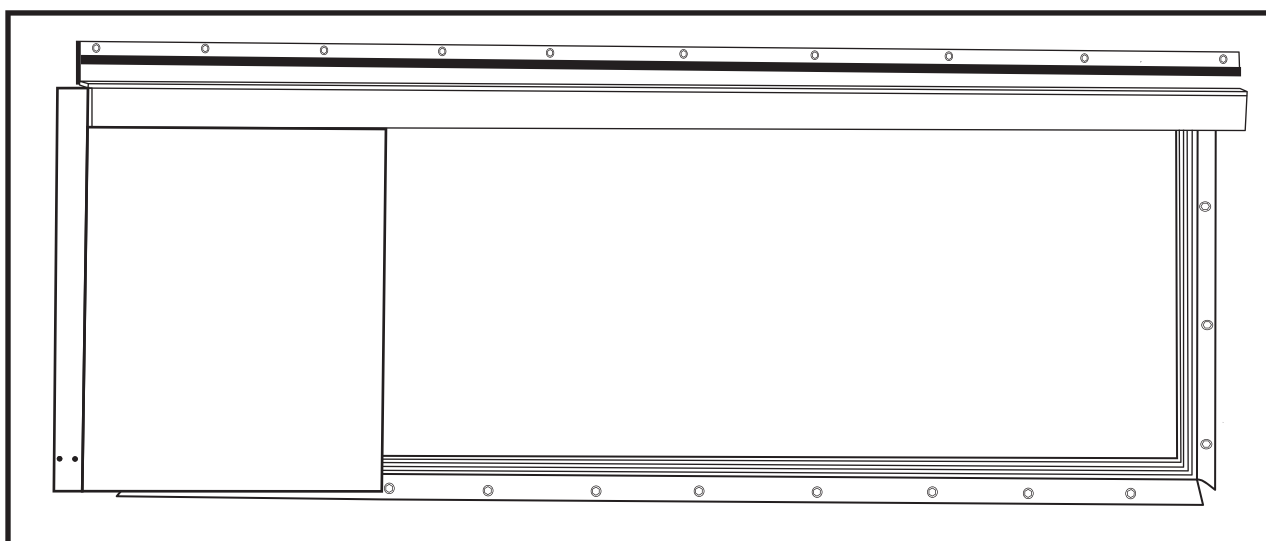
Step 3

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



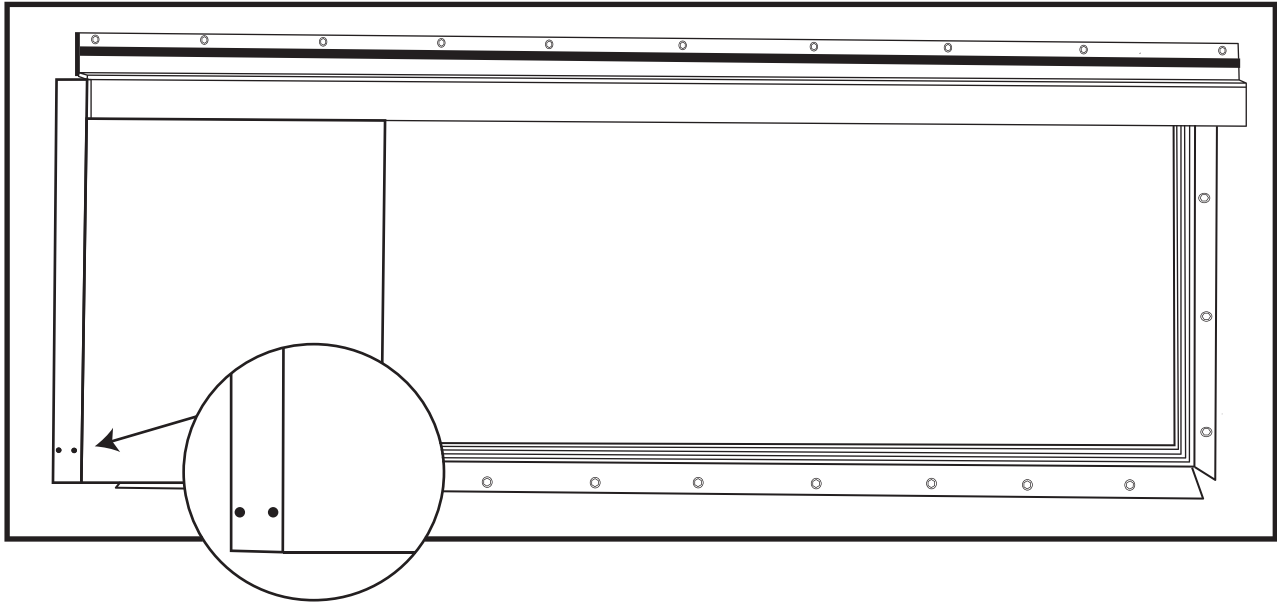
Step 4

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 at the end of the system.



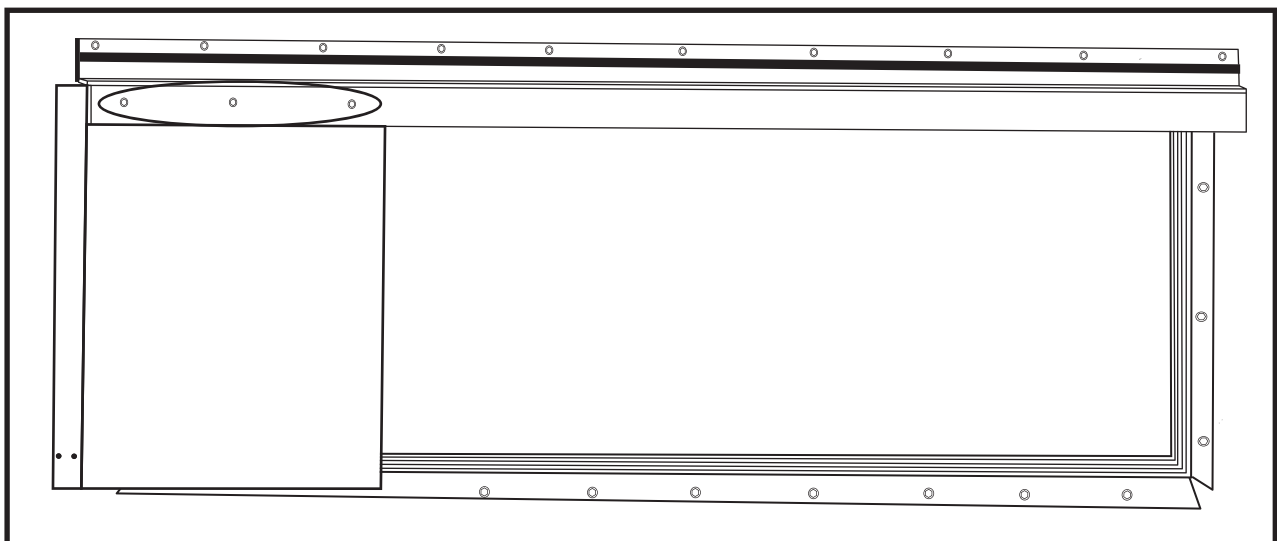
Step 5

Make sure the pre-drilled holes are at the bottom with the aluminum on the left side of the door during installation.



Step 6

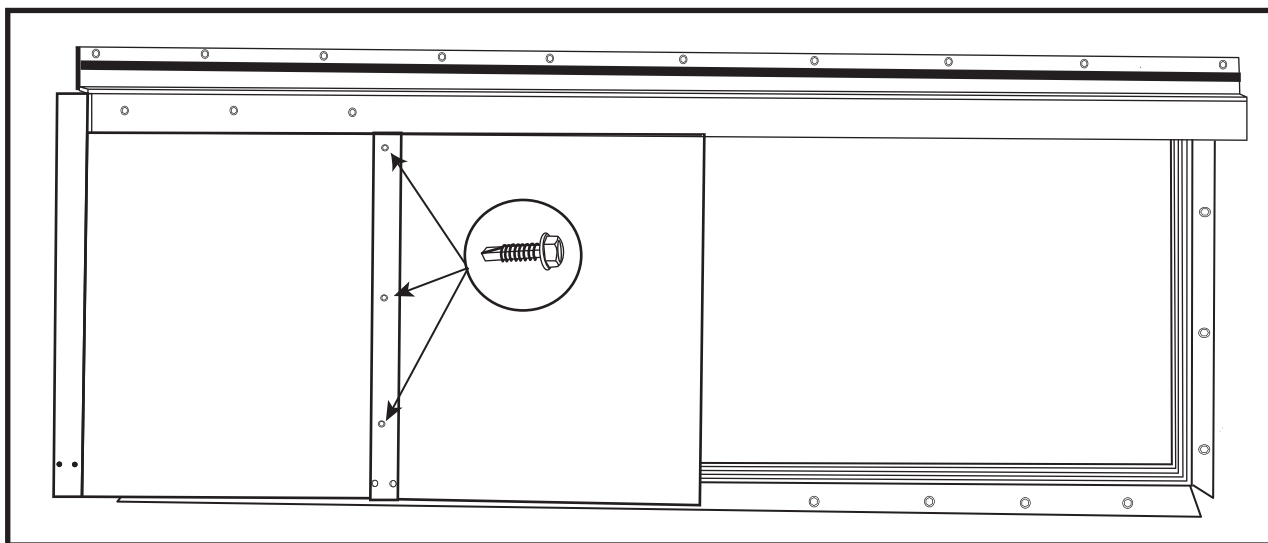
Use 1" roofing screws about every 12" to secure the door to the hinge. **Use an equal amount of screws on the front and back of each door.**





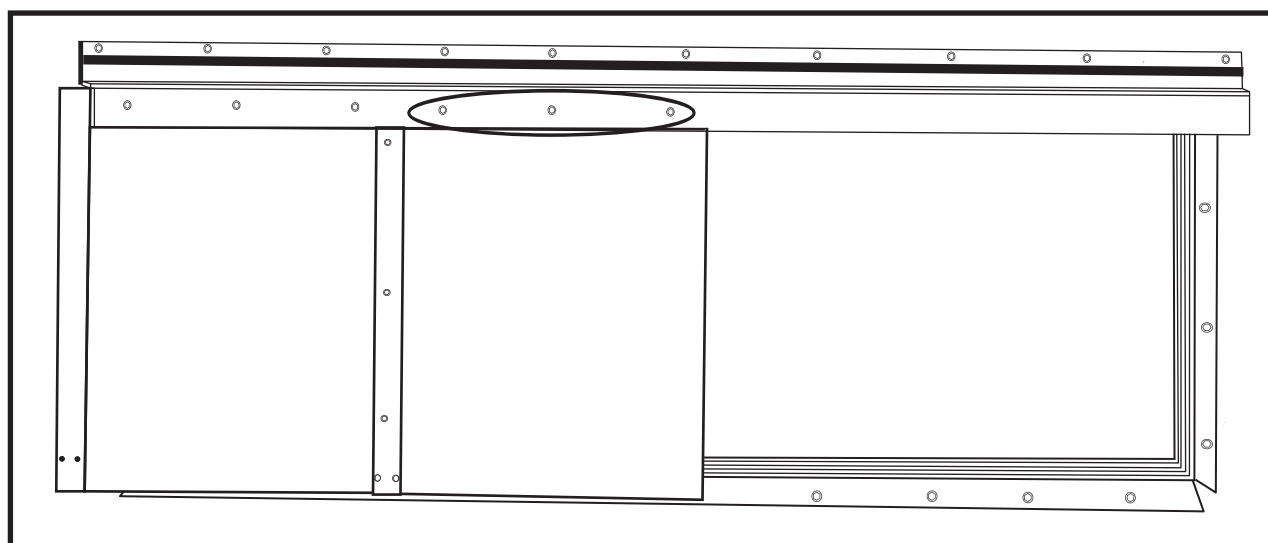
Step 7

Slide the next door into the continuous hinge. Make adjustments as needed to ensure that this door is flush with the first one and secure them together with 3 evenly spaced Tek screws through the aluminum.



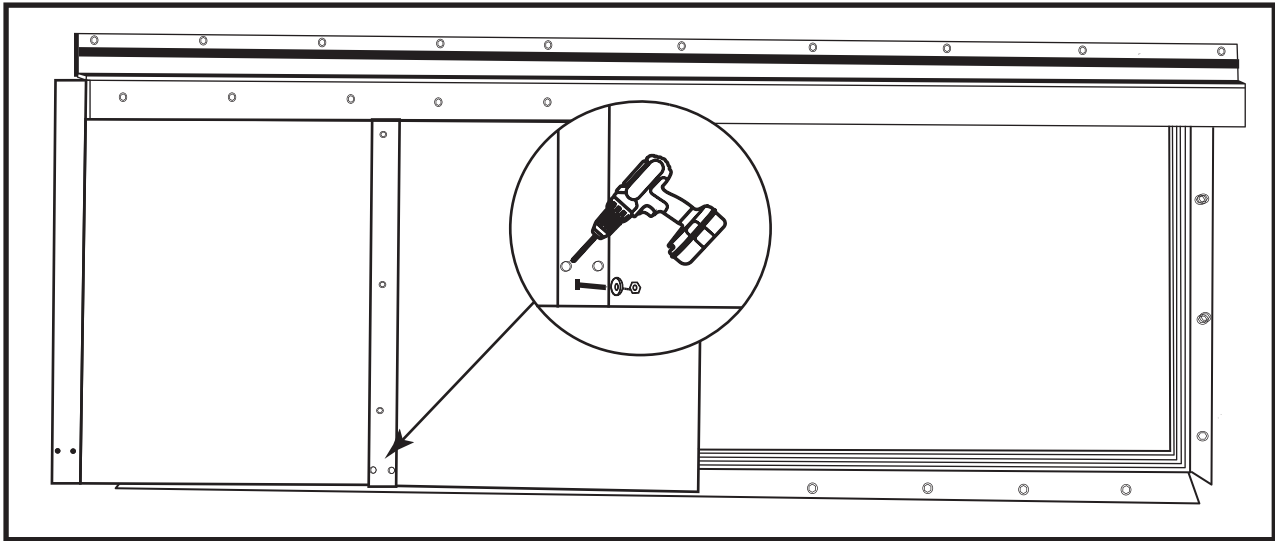
Step 8

Secure the 2nd door to the hinge with 1" roofing screws every 12".



Step 9

Using the pre-drilled hole through the aluminum, drill a $\frac{9}{32}$ " clearance hole through the door. Next bolt the doors together through your newly drilled holes with (2) 1/4"x2" bolts, nuts and fender washers.



Step 10

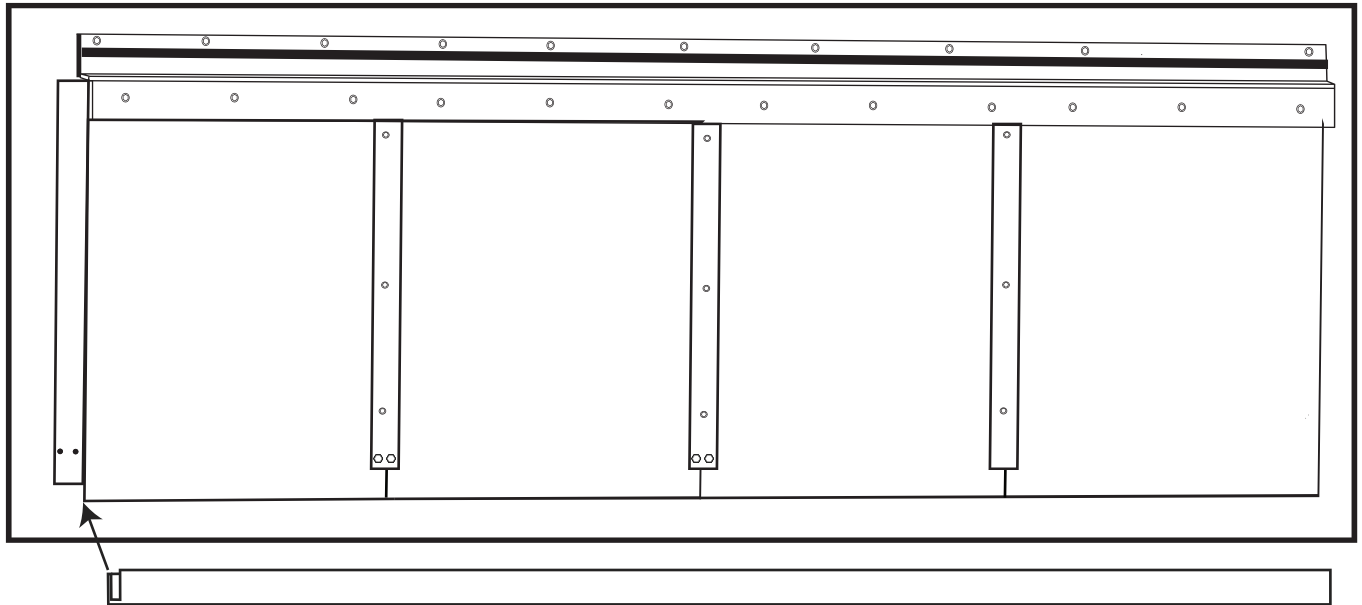
Repeat steps 5 through 9 for the remaining doors.



2.4 INSTALLING ALUMINUM CHANNEL

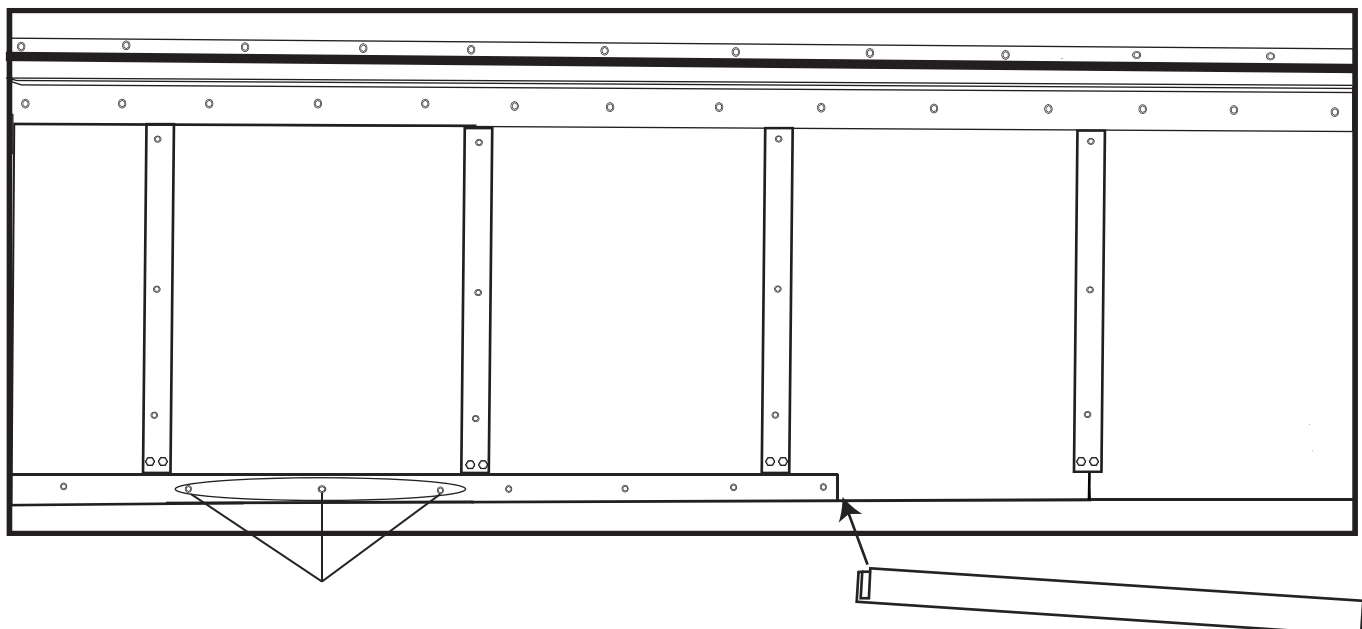
Step 1

Starting at the end with the first door you installed insert an Aluminum C-Channel at the bottom making sure it is flush at the end. Using a rubber mallet place the channel onto the bottom of the door.



Step 2

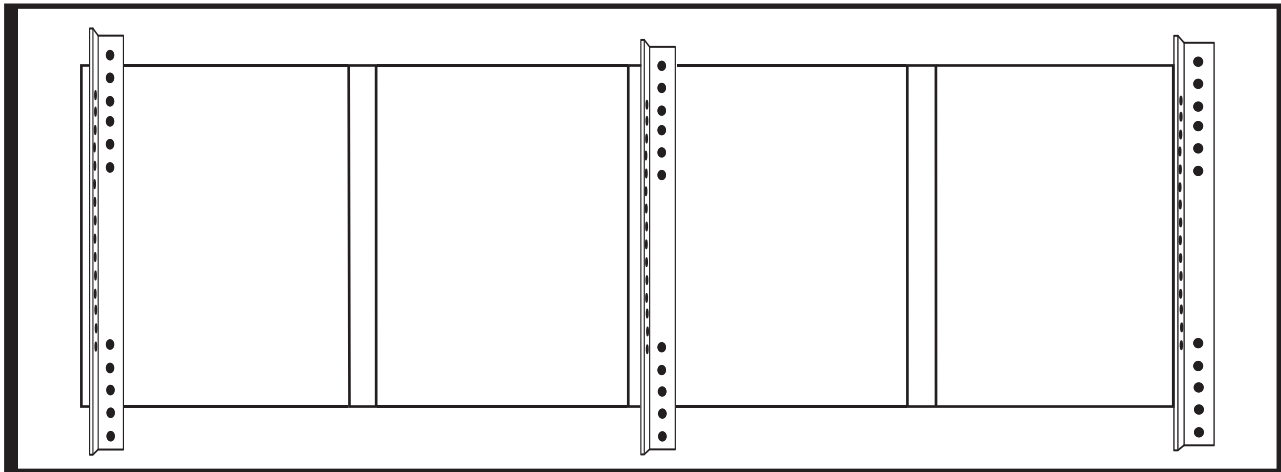
Continue adding on the Aluminum C-Channel to the rest of the systems doors with each piece being flush against the previous. Cut off any excess channel that extends over the end of the system. Secure all of the aluminum channeling with Tek Screws spaced 1' apart.



2.5 MOUNTING BRACKET FOR RACK

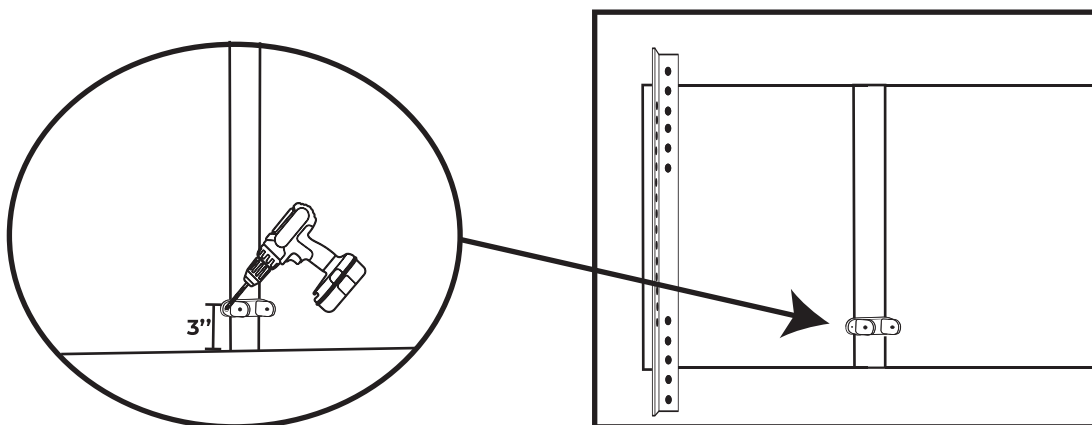
Step 1

On the hallway side of the framing, install a Mounting Angle Iron from the end framing and then every 5' down the length of the framing. These brackets should span the top and bottom framing.



Step 2

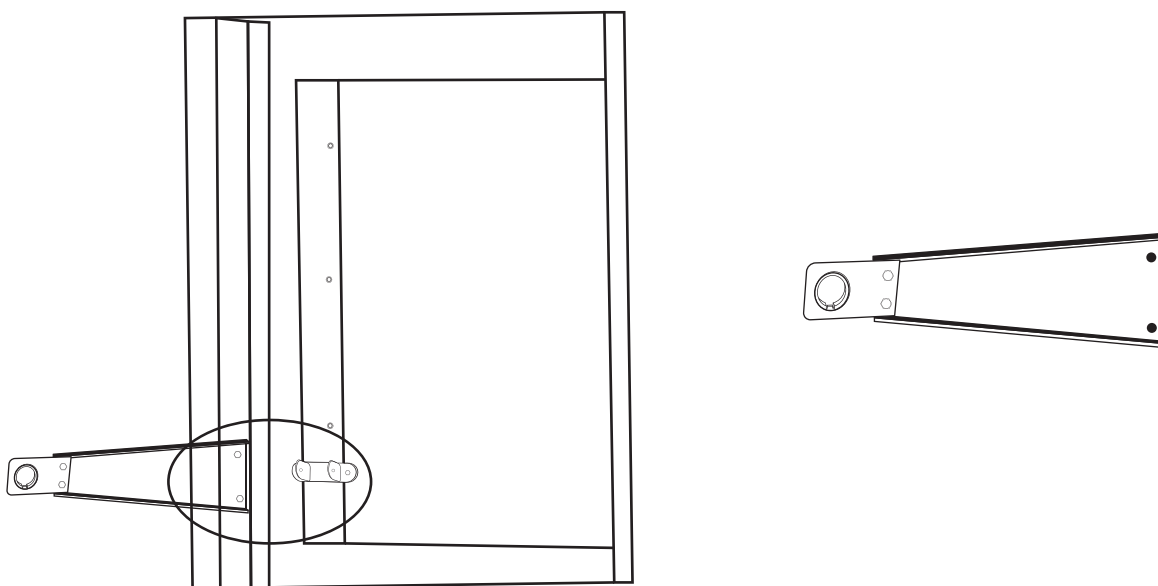
Starting at the first seam where two doors come together measure 3" up from the bottom for the placement of the Mounting Bracket for the Rack. At the spot you marked drill a $\frac{9}{32}$ " hole through the door using the holes in the Mounting Bracket for the Rack as a guide. Make sure the holes go through the entire seam and door. Then bolt on the Mounting Bracket for the Rack with (2) $\frac{1}{4}$ " x 2- $\frac{1}{4}$ " bolts and (2) $\frac{1}{4}$ " Nuts.





Step 3

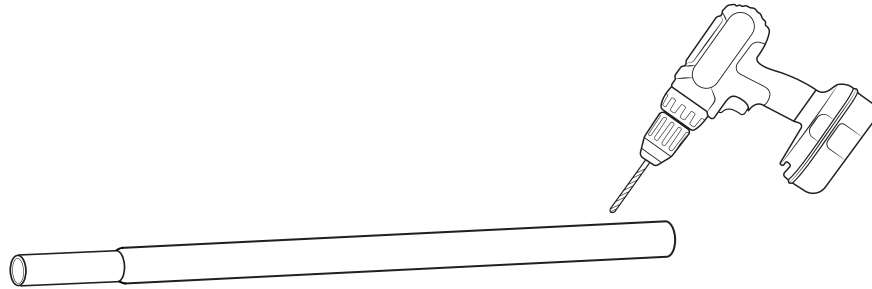
Start attaching the Bronze Bushing to the Offset Bushing Bracket piece with (2) Bolts and Nuts. Once these parts are attached together install the piece on to the Mounting Angle Iron. These should be bolted into the pre drilled holes on the offset bushing bracket near the middle of the door. Repeat this at all of your Mounting Angle Iron placements.



2.6 GALVANIZED PIPE INSTALL

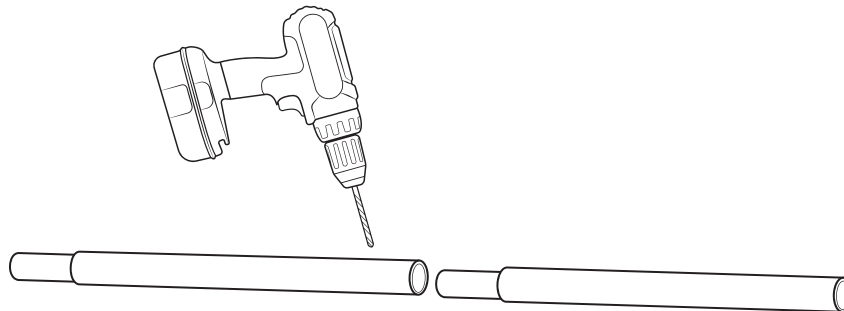
Step 1

For the 10 ft. of 1" Galvanized Pipe that will be at the actuator end drill (2) $\frac{13}{32}$ " dia. holes through the pipe to line up with the holes in the Tube Sprocket.



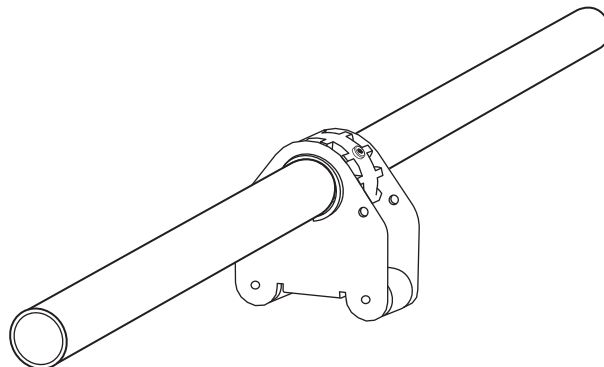
Step 2

For the next 1" galvanized pipe, slide the larger non-swaged end over the smaller, swaged end of the previous pipe. Drill a $\frac{13}{32}$ " diameter hole through both pipes, positioned $1\frac{1}{4}$ " from the end of the larger pipe. Repeat this process for all the pipes in the system, making sure to pair and drill each section together. To avoid mixing them up, it may help to mark each pipe set as you drill. This ensures that during installation, the matching pre-drilled pipes stay together.



Step 3

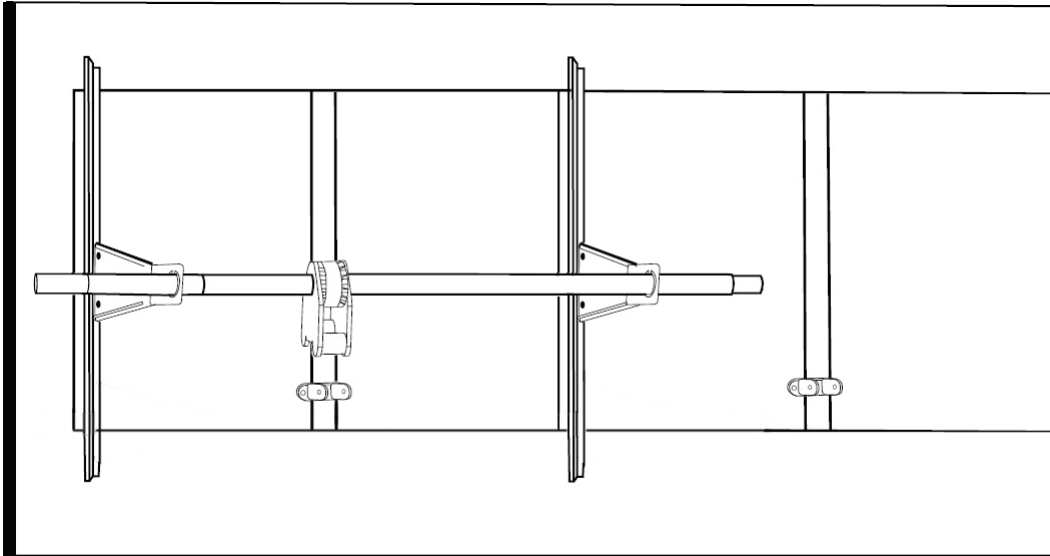
Install (1) Tunnel Door Pinion onto the first pre-drilled 1" Galvanized Pipe. This Tunnel Door Pinion will eventually line-up with an installed Mounting Bracket for Rack that was placed on every other door.





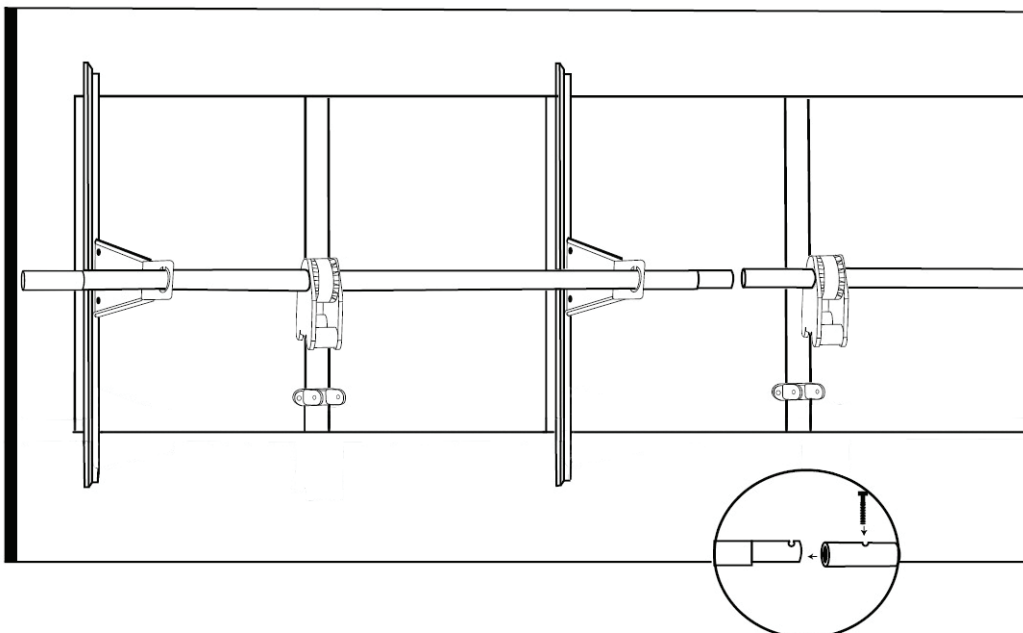
Step 4

For the first 1" Galvanized Pipe with Tunnel Door Pinion, slide the non swaged end of the 1" Galvanized Pipe through the Bronze Bushing on the extension bracket so that the 1" Tunnel Door Pinion is on the left side of the bracket.



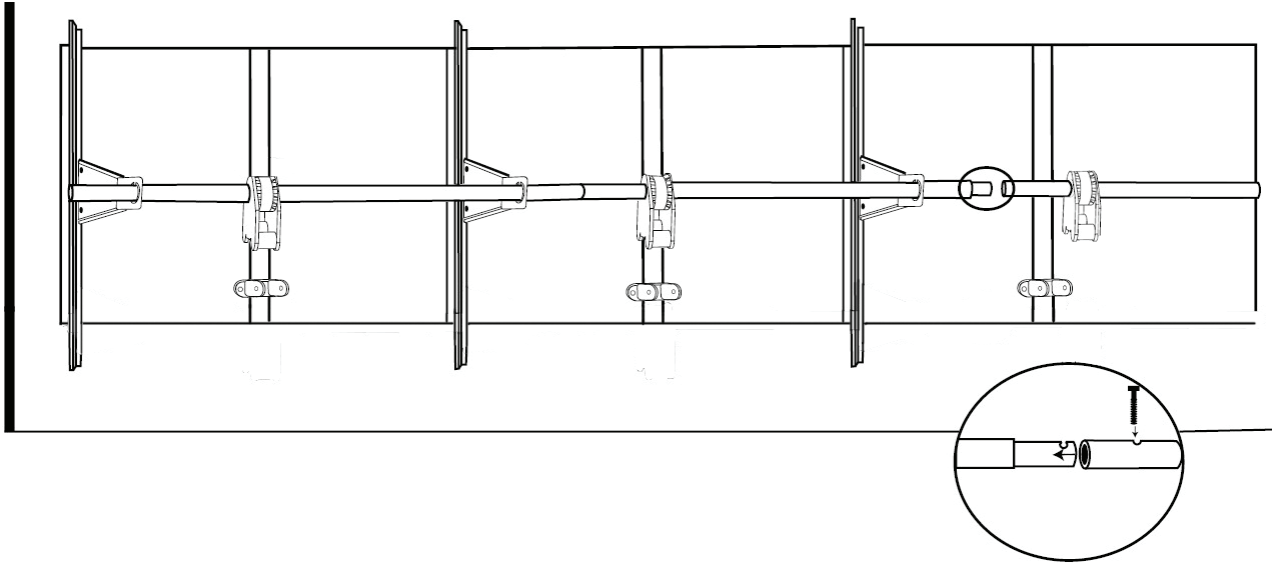
Step 5

For next 1" Galvanized Pipe slide (1) Tunnel Door Pinion onto Pipe, then slide the swaged end of the 1" Galvanized Pipe through the next Bronze Bushing. Then slide the opposite end onto the swaged end of the previous pipe. If needed slide the Tunnel Door Pinion past the joint in the pipes to align with the Pivoting Connector. Align the pre-drilled holes and secure pipes together using (1) 1-1/4" x 2" Bolt and (1) 1/4" Nut. Repeat this step for all rack & pinions but the last 1" Galvanized Pipe.



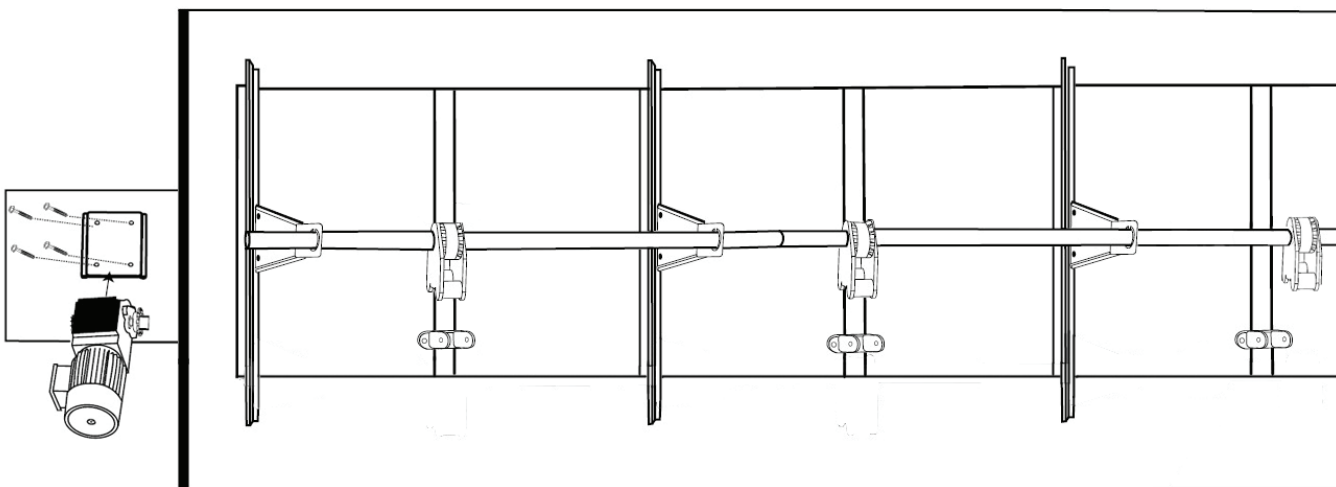
Step 6

The last 1" Galvanized Pipe requires (2) Tunnel Door Pinions on the Pipe. Slide the 1" Galvanized Pipe into the last Bronze Bushing, there will be one Tunnel Door Pinion lined up with each Mounting Bracket for Rack. Slide the opposite end onto the swaged end of the previous pipe. If needed slide one of the Tunnel Door Pinions past the joint in the pipes to align with the Mounting Bracket for Rack. Align the pre-drilled holes and secure pipes together using (1) 1-1/4" x 2" Bolt and (1) 1/4" Nut. Cut excess 1" Galvanized Pipe 3" past the last Tunnel Door Pinion.



Step 7

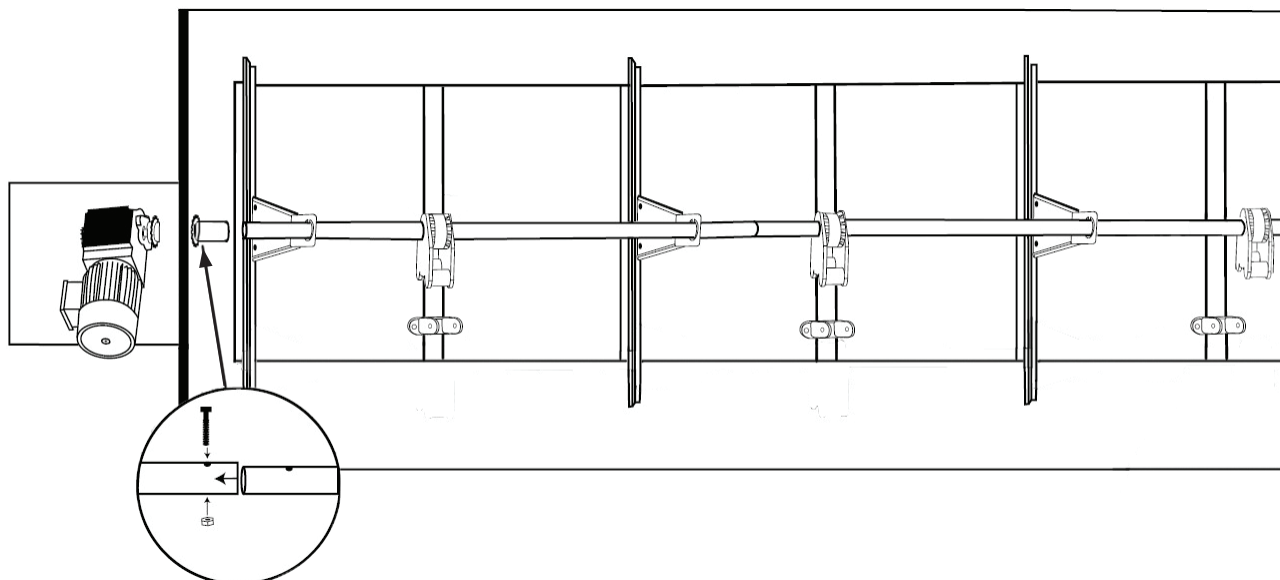
On the side of the system where your actuator will be, install the actuator mount to the wall with (4) 5/16" x 2" wood screws. Once the mount is on the wall attach the actuator to it with (4) Bolts and Nuts.





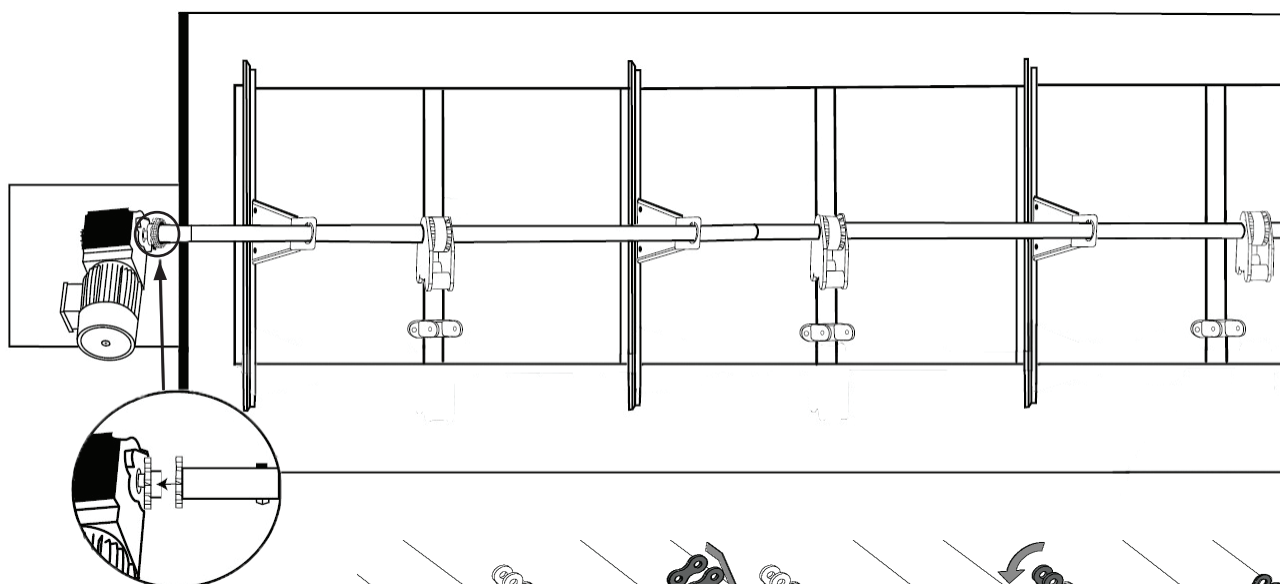
Step 8

Slide the Tube Sprocket over the end of the pipe near the Actuator and secure in place using (1) 1-1/4" x 2" Bolt and (1) 1/4" Nut.

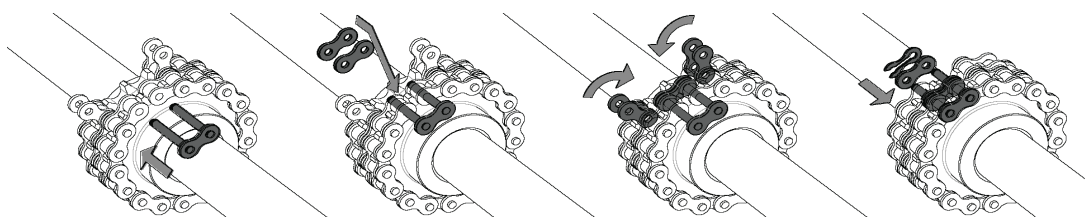


Step 9

Align the hole in the Tube Sprocket on 1" Galvanized Pipe with the sprocket on the shaft of Actuator and secure together with chains.

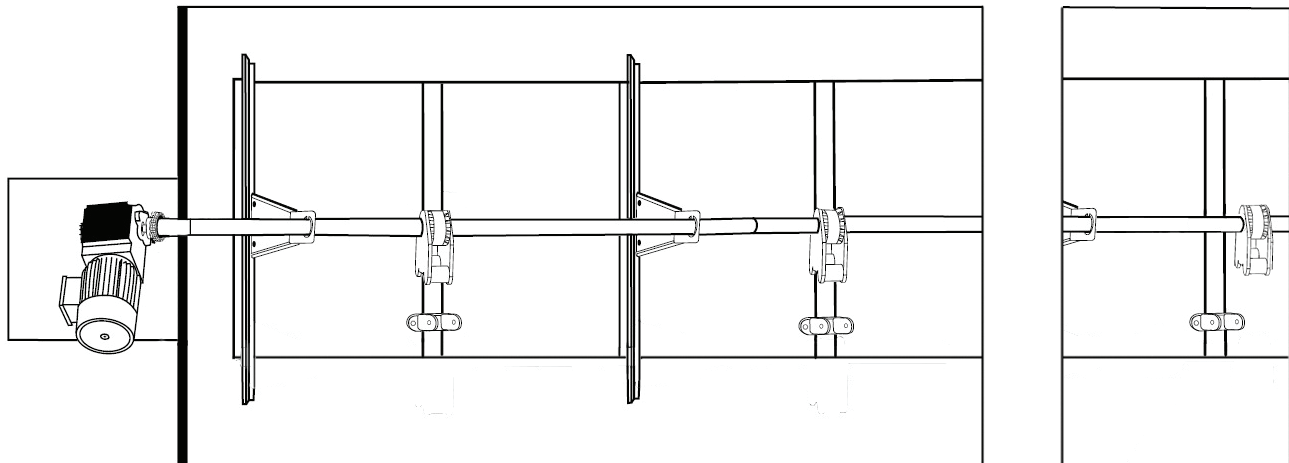


***Note:** Please see diagram on how to place chains on the sprockets.



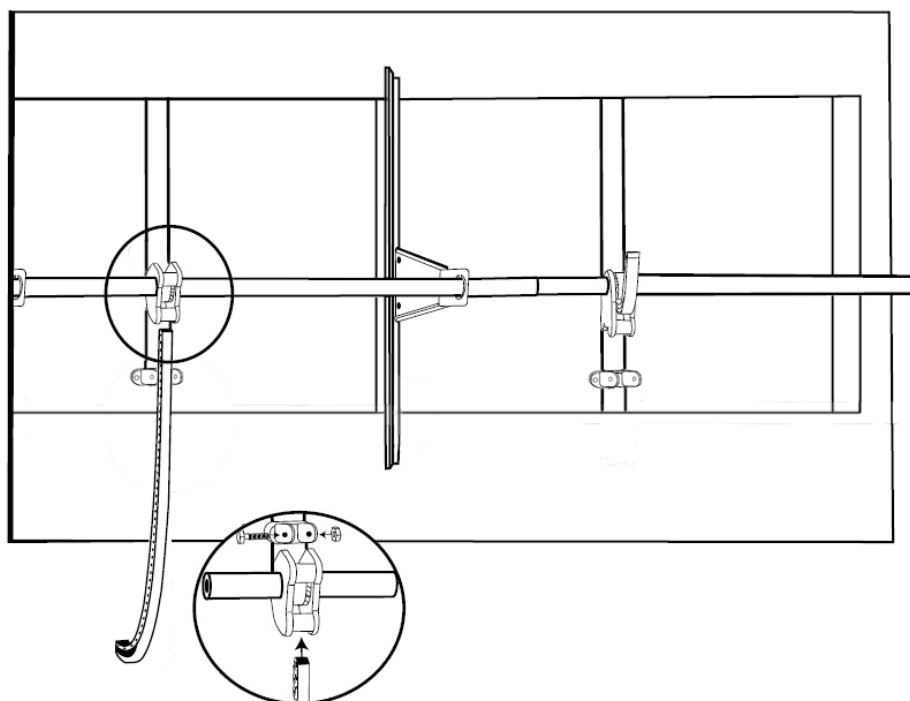
Step 10

Align each Tunnel Door Pinion with Set Screws with a Mounting Bracket for Rack on the Door below the 1" Galvanized Pipe.



Step 11

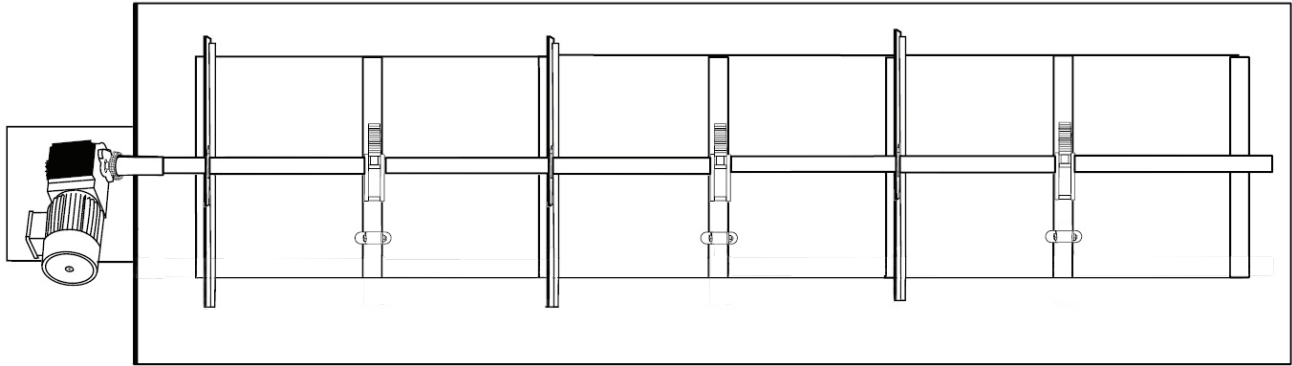
Rotate the Tunnel Door Pinion assemblies 90° so that the flat part is away from door and insert end of the Rack with no teeth into the pinion Assembly and slide it in until the teeth on the Rack engage the Tunnel Door Pinion. Rotate the Rack towards the bottom of the door and fasten the end of the Rack to the Mounting Bracket for Rack on the door using a bolt and nut.





Step 12

Make sure each Tunnel Door Pinion is lined up with each Mounting Bracket for Rack and the Rack is as straight as possible. Tighten the Set Screws on each Tunnel Door Pinion on the 1" Galvanized Pipe.



Step 13

Before operating the system, use Tubes of Grease provided to lightly grease the Tunnel Door Pinion and the back of the Rack where it slides through. See Actuator Manual for wiring instructions.



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