



# DIVERSIFIED

## Ratchet Strap Drive System for Tunnel Doors

Do not use this manual if installing with **Diversified Doors**.



Installation Manual

## **Important**

- **This Manual is to only be used when installing the Ratchet Strap Drive Operating System on Doors that are not from Diversified.**
- **The Ratchet Strap Drive Operating System should not be used on Doors that do not have a strong metal frame outer structure.**
- **Diversified is not responsible for any damage to other manufacturer doors.**
- **Diversified is not responsible for any damage to other manufacturer doors or the proper operation of the doors if not installed correctly and in accordance with this manual.**
- **Ratchet Strap Drums should be spaced no more than 5 feet apart to ensure the doors seal properly. Ensure you order enough Ratchet Strap Kits to meet this requirement and also add a Kit for each end of the door run.**

## **Limited Warranty**

All products are warranted to be free from defects in material and workmanship for a period of two (2) years from the date of purchase if installed and used in strict accordance with the installation instructions. Liability is limited to the sale price of any products proved to be defective or, at manufacturer's option, to the replacement of such products upon their return. No products are to be returned to the manufacturer, until there is an inspection and a return-goods authorization.

All complaints should be directed first to the authorized distributor who sold the product. If satisfaction is not obtained or the name of the distributor is not known, write the manufacturer that appears below.

This limited warranty is expressly in lieu of any and all representations and warranties expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. The remedy set forth in this limited warranty shall be the exclusive remedy available to any person. No person has authority to bind the manufacturer to any representation or warranty other than this limited warranty. The manufacturer shall not be liable for any consequential damages resulting from the use of our products or caused by any defect, failure or malfunction of our products. (Some areas do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.)

This warranty gives you specific legal rights and you may also have other rights that vary from area to area.

### **Warrantor:**

#### **Diversified**

556 Industrial Way West Eatontown, NJ 07724

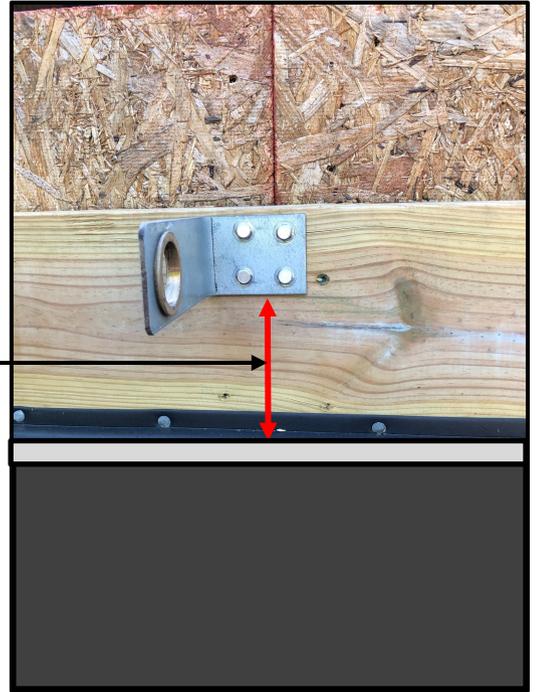
732.363.2333

Toll Free: 1.800.348.6663 Fax: 732.905.7696

## Step 1: Install Pipe Brackets

Install a Pipe Bracket as shown at every Framing Post along the Door opening Header. Brackets must be a minimum of 3.5 inches above the top of the Doors. Brackets require 4 each 2.5" long Stainless Steel Screws that must screw into the house framing and not just the plywood walls.

Minimum of 3.5  
inches to Top of Doors



## Step 1a: Pipe Brackets (Limited space)

If space is limited above the Doors (Vents) or the header does not provide enough space to install the Brackets on, then simply install 2x4 blocks at every frame post for the Pipe Brackets to mount to as shown below. Ensure a minimum of 3.5 inches from the bottom of the Brackets to the top of the Doors when closed. Brackets must be level and in line with each other.



## Step 2: Install Pipe and Strap Drums

Slide the **Pipe sections** through the Pipe Support Brackets while at the same time placing Ratchet **Strap Drum Kits** onto the pipe as shown and with the Set Screws on the right side. **Start with a Ratchet Strap Drum at the vertical edge of the first Door and then spaced no greater than every 5 feet apart**. The swaged end of the Pipe needs to point in the opposite direction from where the Gear/Motor will be mounted.



Set Screws must  
Be on Right side  
when installed



## Step 3: Connect Pipe Ends

Slide the swaged ends of each Pipe section together and insert the connecting Bolt/Nut. **Be sure that the Ratchet Strap Drums are in the correct position before installing the Bolt.** Bolt/Nut are shipped with each section of pipe.



#### Step 4: Install Gear/Motor

Install the **DuraDrive** and connect its Drive shaft to the end of the Pipe with a Bolt/Nut. When installing the Pipe ensure the non-swaged end of the Pipe is at the DuraDrive end of the Doors.

It is recommended to use Carriage Bolts to secure the DuraDrive Bracket to the wall mounting plank. The DuraDrive Bracket must be on the same plane as the Pipe Brackets.

**Note:** The motor can be down or horizontal when on the Left end of the pipe. It can only be up or horizontal on the Right end of the pipe. There is a Left Hand DuraDrive available for use to have the motor Down on the Right End of the pipe.

It is highly recommended that the **Manual Drive Shaft** of the motor be easily accessible in case the Doors ever need to be operated manually (loss of electrical power, ref Step 10).



#### Step 5. Install Wall Strap Bracket

Install the Strap Brackets to the wall

**½ inch** above the top of the Door and directly above where the position of the Ratchet Strap Drum will go. Brackets require 2 each **2.5" long Stainless Steel Screws** and must screw directly into the house framing and not just the plywood wall.

(Screws provided in Kit).



## Step 6: Attach Universal Door Plate

Slide the **Strap Drum** on the pipe directly over the **Strap Bracket** and run the strap off the back of the Drum Spool and route through the Strap Bracket as shown.

Place the pre-drilled **Universal Door Plate** as shown on your Door directly below the Strap Bracket so the Strap is centered on the Plate.

Using a  $\frac{1}{4}$  inch **drill bit**, drill a hole through the bottom hole of the Plate and through the Door.

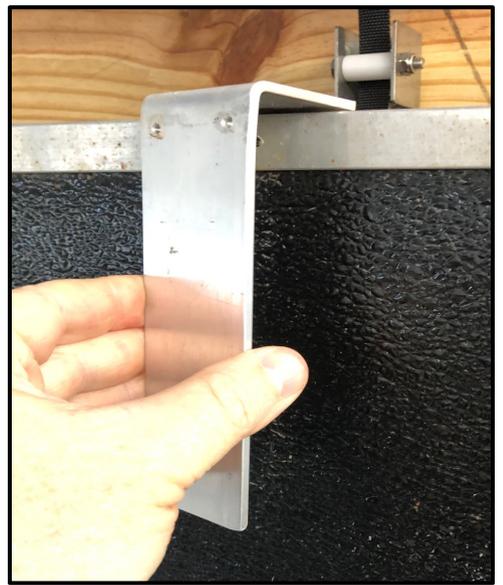
Now insert the 2.5" Strap Bolt through the Strap end, Plate, and through the Door securing the Strap to the Door.

On the backside of the door install the Lock nut and large washer to the 2.5" Strap through bolt.

**Do not over tighten** the lock Nut for the Strap Bolt or damage could result to the Door Skin.

**Finger tight** is all that is required.

Finally, install 2 each sheet metal screws into the pre-drilled holes at the top of the Plate to secure the Universal Door Plate to the metal frame of the Door.



## Step 7: Secure Ratchet Strap Drum to Pipe

Secure the Door in position by tightening the two Set Screws on the Ratchet Strap Spool Drum using a 4mm Hex Allen Wrench. It is important that the Ratchet Strap Drum is positioned to keep the Strap vertically straight and directly down and through the Strap Bracket and Universal Door Plate as shown.

This will also hold the door in the up position.



## Step 8: Set DuraDrive Open/Close Limit Switches

**a) At this point all Ratchet Strap Drums should be installed and attached to the Doors. Ensure they are all adjusted the same so all the Doors are in the same position throughout the entire Door run.**

First, run the DuraDrive to full open until there is less than one wrap of Strap on all the Drums. **This removes any slack in the Straps.**

**b) Then, run the Doors in the closed direction until you reach the desired opening distance and set the **OPEN limit switch position** within the DuraDrive (see DuraDrive owners manual).**

**c) Next, begin to CLOSE the Doors using the manual switches of the DuraDrive. **Once the Doors begin to compress the top Seal, STOP the DuraDrive and set the CLOSE switch position.** Be careful not to change the Open position limit switch while adjusting the Close switch.**

**Proceed to step 9...**

## Step 9: Final Door Adjustment for Ratchet Strap Drum

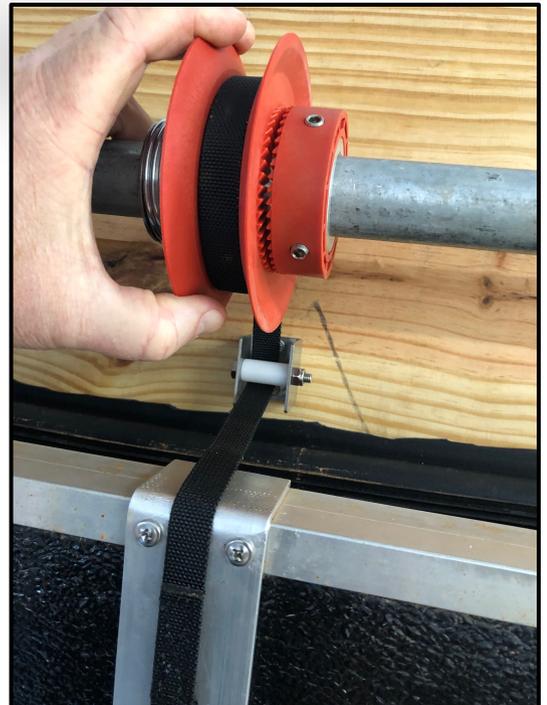
a) With the DuraDrive in the set **CLOSED** position and both Set Screws of the Ratcheting Strap Drums tightened down onto the pipe, rotate the Ratchet Strap Drum **Collar** downward using the **Lock Wrench Tool** provided with each DuraDrive (or Channel Lock Pliers can be used) to operate the ratchet mechanism. This will tighten the Strap and compress the Door tight against the seal. ([See video link](#))

b) With all the Ratcheting Strap Drums tightened, run the Doors fully Open and Closed a couple of times to ensure no further Strap adjustments are required and all the slack is out of the Straps.

c) If needed you may also make small adjustments to the Doors while in the open position. With the Doors slightly in the open position you can turn the left side of the Ratchet Strap Drum downward with your hand while pulling to the left to unlock the Ratchet teeth. This will tighten the Strap. Then close the Doors with the Drive motor to ensure the proper seal.

**It is Highly recommended that you only adjust the Ratchet Strap Drum in very small increments (couple of teeth) with this method to ensure you don't over tighten the Doors when you then close with the Drive Motor.**

**([See video link](#))**



## Step 10: Manual Drive/Emergency Backup

The DuraDrives are equipped with a Manual Drive Shaft on the motor that can be used during installation or as an **Emergency Backup system** should there ever be a loss of electrical power to the building.

On the bottom of the motor is a 3/8 inch Hex Drive Shaft that can be operated opened or closed by simply using a common Battery powered Hand held Drill motor with a 3/8" drive socket.

**Use caution when using the Manual Drive as you may run through the Limit Switches of the DuraDrive.**

