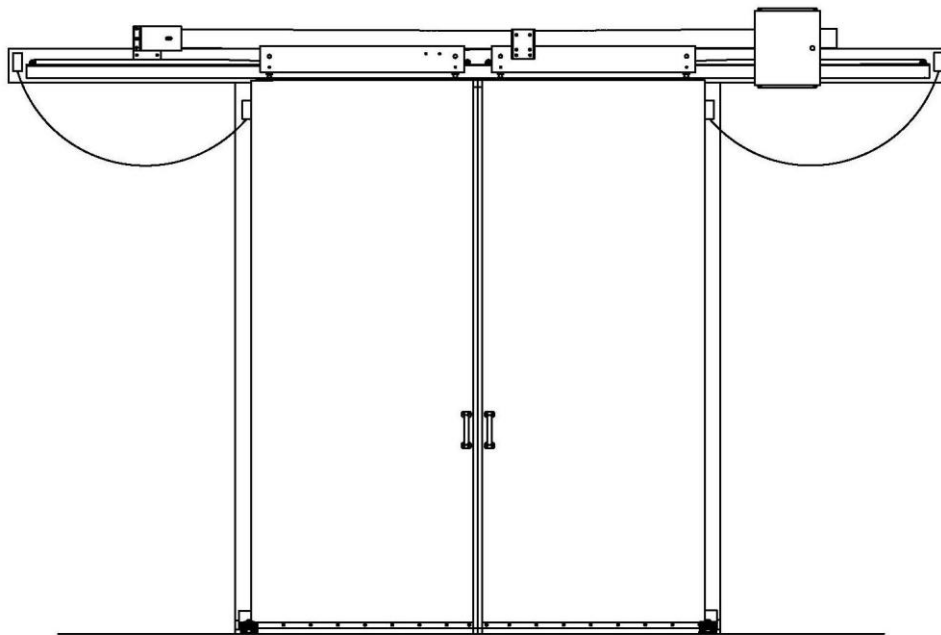




## Installation Manual Power Operated Cold Storage Doors



Model DHE Shown

For Model :

SHE – Single Horizontal Electric

DHE – Double Horizontal Electric

Revised: 10 October 2022

# IMPORTANT

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THIS DOOR ASSEMBLY HAS BEEN CUSTOM DESIGNED AND MANUFACTURED FOR THIS OPENING. REVIEW INSTALLATION INSTRUCTIONS THOROUGHLY **BEFORE** INSTALLING DOOR UNIT.

**DO NOT ATTEMPT TO  
ALTER, CUT, MODIFY, REMOVE,  
DIS-ASSEMBLE AND RE-ASSEMBLE  
OR RE-MANUFACTURE  
ANY COMPONENT  
FROM IT'S ORIGINAL FACTORY CONDITION!**

**ANY MODIFICATION TO THIS DOOR ASSEMBLY  
WILL VOID THE WARRANTY IN IT'S ENTIRETY!**

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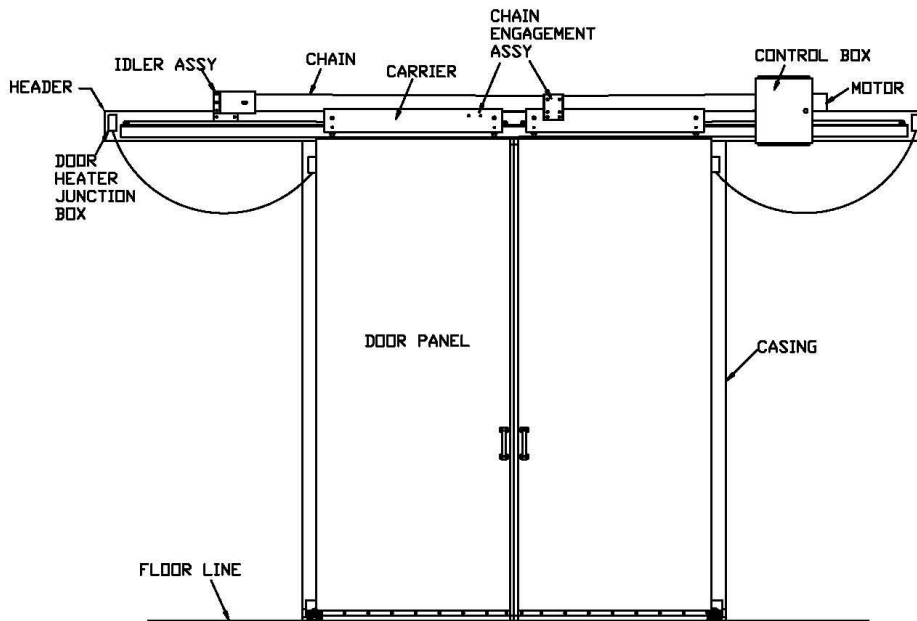
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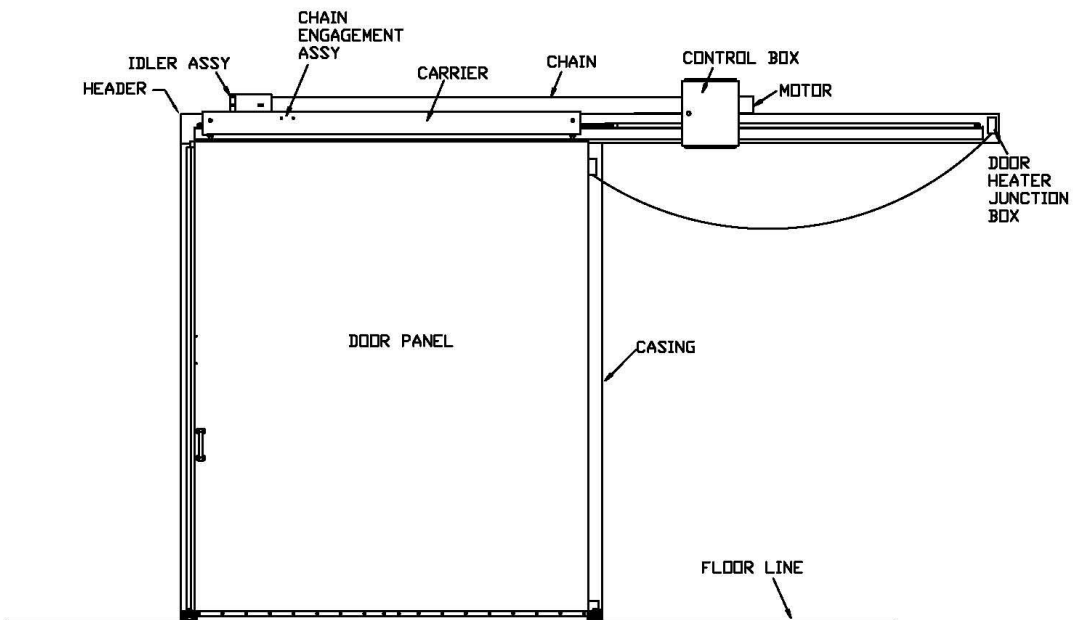
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The following are general arrangement illustrations to aid you with device locations and terminology.

### BI-PART DOOR



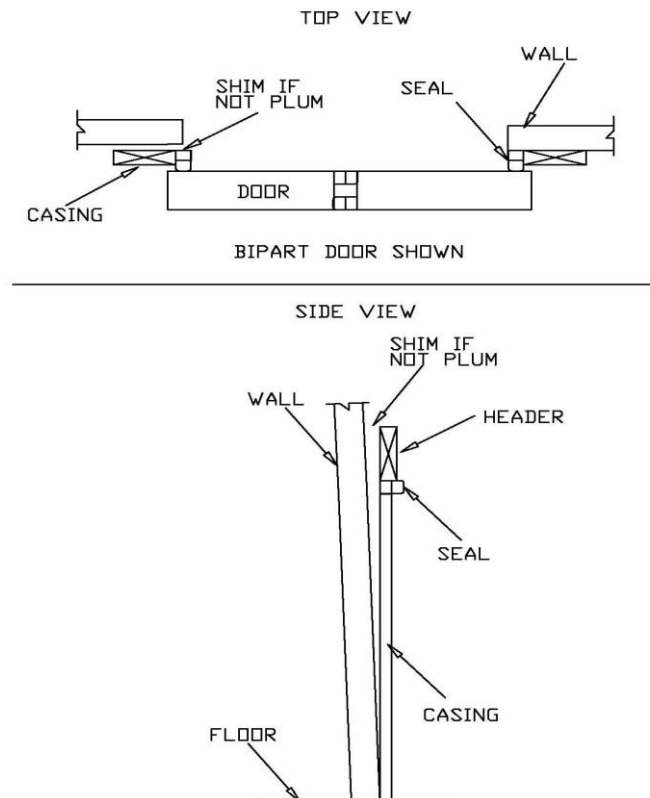
### SINGLE SLIDE DOOR



## HEADER AND VERTICAL CASINGS

*This Section will discuss how to properly set up and install the Header and Vertical Casings to prepare to hang the horizontal sliding door. Note: if your door has the optional chain cover remove at this time and replace after the door system is completely installed.*

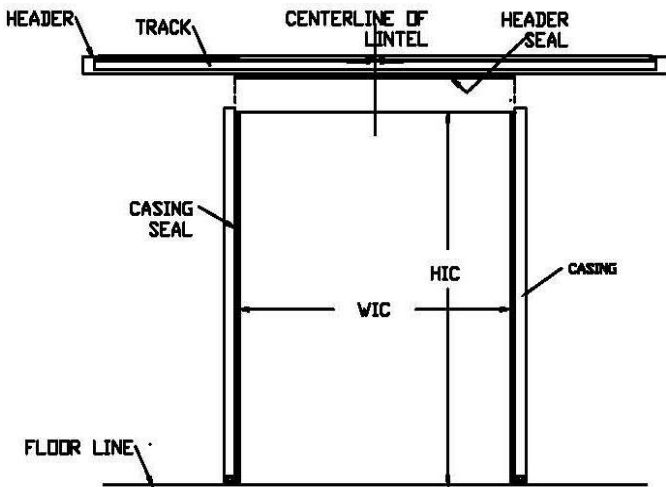
**T**he casings must be plumb and parallel. If the floor slopes, start by setting the casing on the high side first. Shim to raise the other casing so that the top of the casing is level. If wall is not plumb, shim as shown below.



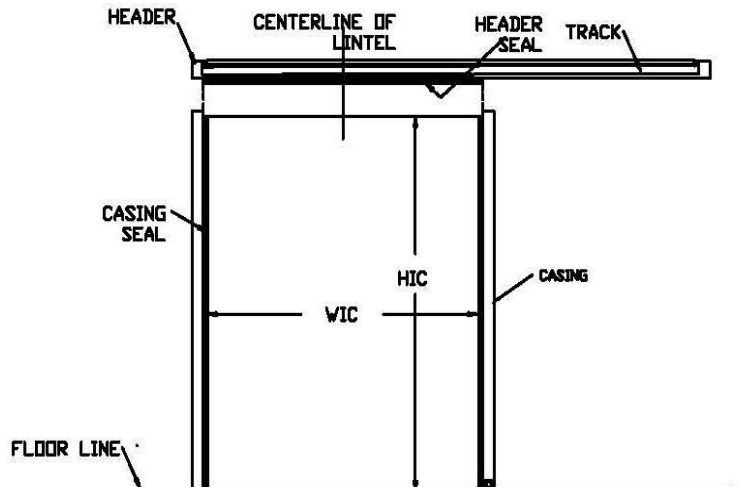
Plumb casing as shown and attach securely to wall using fasteners through holes pre-drilled

**SINGLE AND DOUBLE HORIZONTAL SLIDE**

The header must be plumb and level on the same plane as the casings. Shimming the header might be required to set it on the same plane as the casings. Install entire header on top of vertical casings using fasteners (optional) provided through holes provided in header (Note: on power doors additional mounting holes are located beside the motor and idler assy) . Tighten all fasteners on casings and header. Re-check to see that complete assembly is plumb and level.

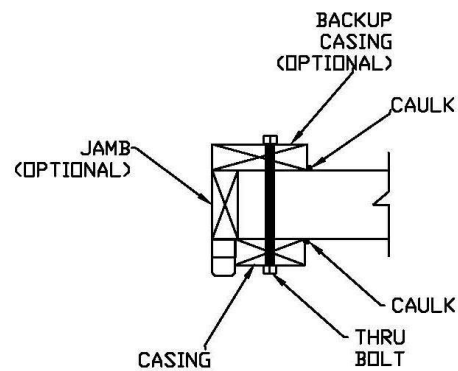
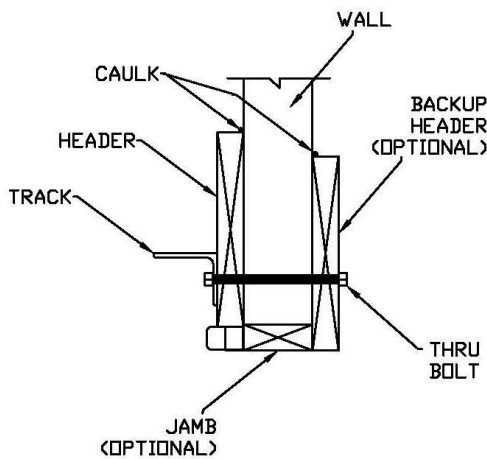


**BIPART DOOR**



**RIGHT SLIDE DOOR SHOWN**

NOTE: If back-up header and casings or jamb covers are required, install as illustrated below.



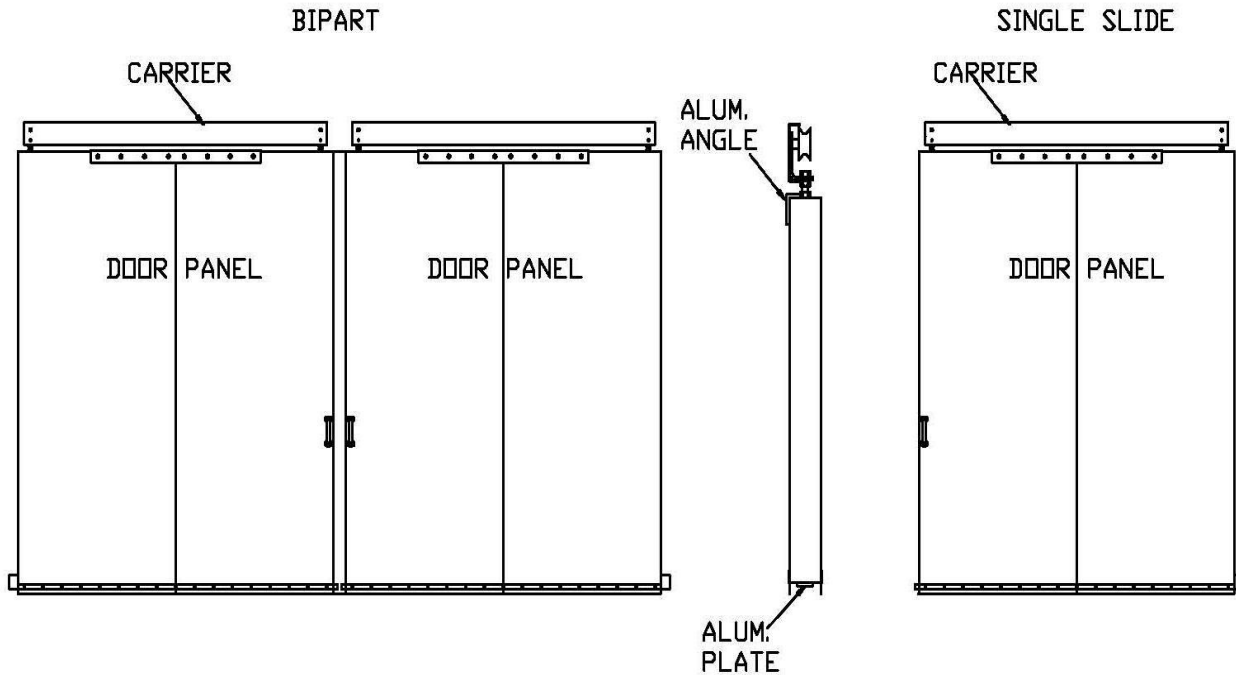
Use sealant to provide vapor seal between header, casings and wall. Compliance with above is essential to ensure proper contact between door and gaskets. Seal and attach securely

Section  
2

**DOOR(S) ASSEMBLY**

*This Section will discuss how to properly assemble and install the multiple door panels. (Not required on single doors without spine seal.*

If door is larger than SHS 8'0"x10'0" or DHS 16'0"x10'0" door may be 2-piece construction requiring the individual sections to be bolted to securing angles and plates. The illustration below shows an example of a single and a double horizontal slide, and how to attach the securing angles and plates. Use the hardware provided to fasten the securing angles and plates to the door sections.



Once the securing angles and plates are attached to the door sections the door(s) is now ready to be attached to the door carrier. The door carriers simply bolt to the top of the door panel(s). Locate the threaded holes in the top of the door panel(s) and thread the adjustment nut into the threaded holes.

NOTE: Make sure that the vertical side of the door carrier faces the trackside of the door panel(s).

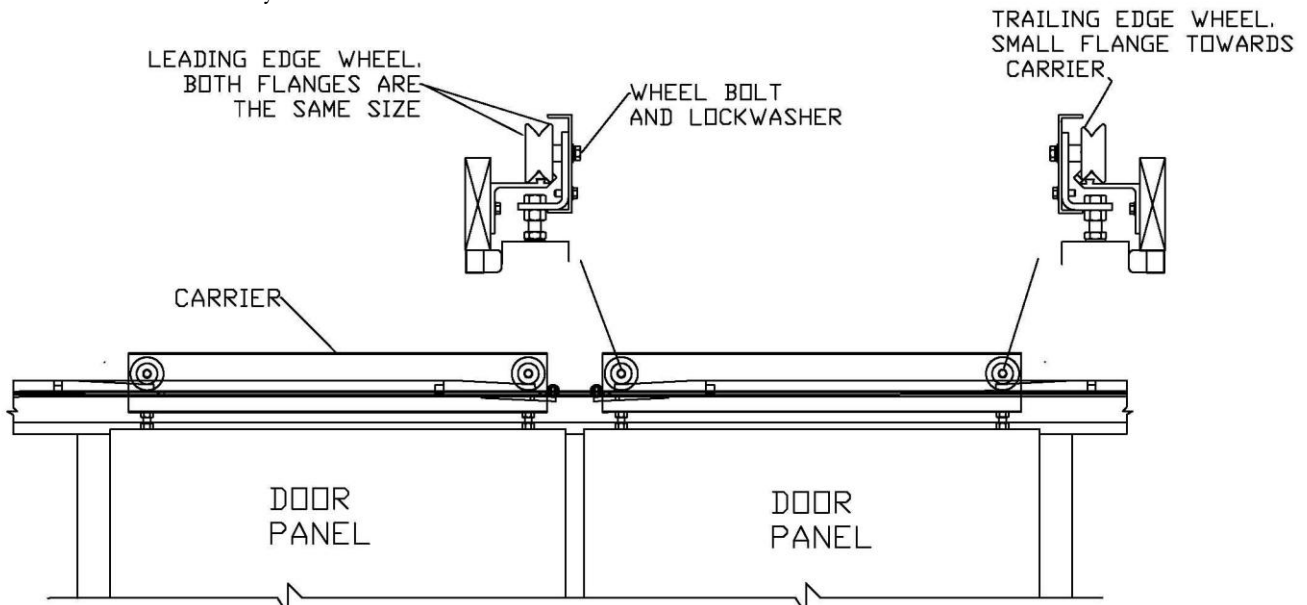
## DOOR(S) PLACEMENT

*This Section will discuss how to properly install the door panels and how to hang the horizontal sliding door.*

To hang the door position the door panel(s) so the wheels are at the track ramps. These are located at the top of the track, where the carrier wheels would rest if the door is in the closed position. Once the door(s) are located in front of the closed position remove the wheels from the carrier by removing the wheel bolt and lock washer washer

**NOTE:** The leading and trailing edge wheels are not the same and MUST be placed back in the same location as they were when shipped.

Once the wheels are removed from the carrier, move the door(s) toward the header and re-install the wheels. **Make sure that the wheel bolts are tight.** The illustration below shows the doors of a double horizontal slide with the leading and trailing edge wheels installed on the track correctly.



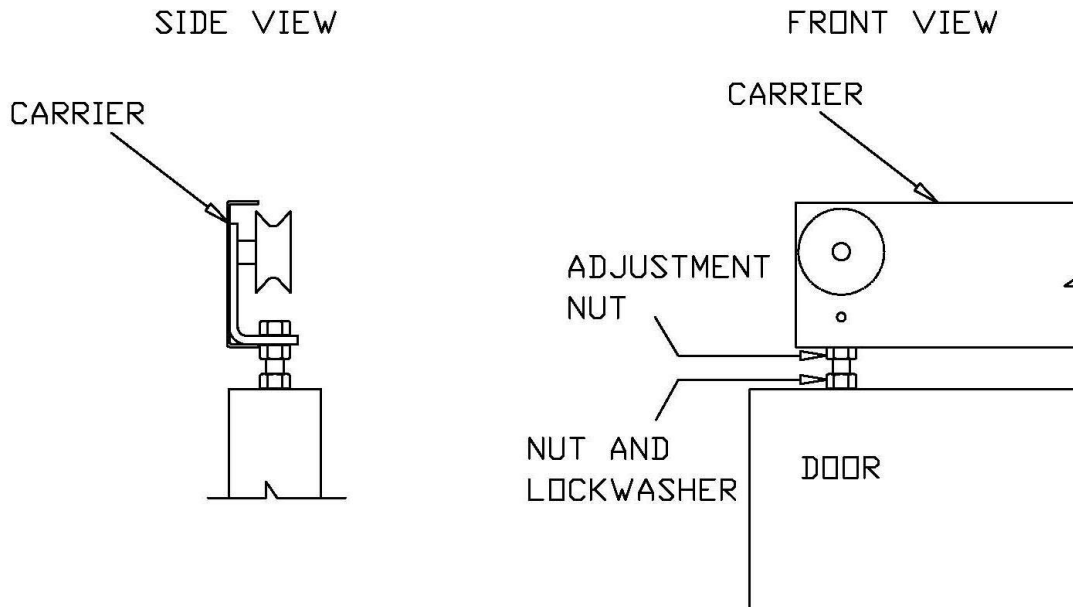
Once the door(s) are hung, slide the door(s) back and forth to the open and closed positions to ensure that they are free from obstructions and there are no obstructions. **Also ensure that the wheels drop down the wheel ramps.**



## DOOR AND BOTTOM SEAL ADJUSTMENT

*This Section will discuss how to properly adjust the doors vertical height to adjust the bottom door seal to minimize cold air leakage.*

The bottom seal should just contact the floor with a slight crush or bend to seal. To achieve this loosen the lower nut. Rotate the adjustment nut right to lower or left to raise the door. Once the door is at the required level tighten the lower nut. Proceed with the next adjustment screw adjustment if necessary, making sure that the leading edge of the door panel is plumb and perpendicular to the header when finished..



Now, check to see if the bottom seal is now depressed, approximately 1/8" evenly.

Section  
**5**

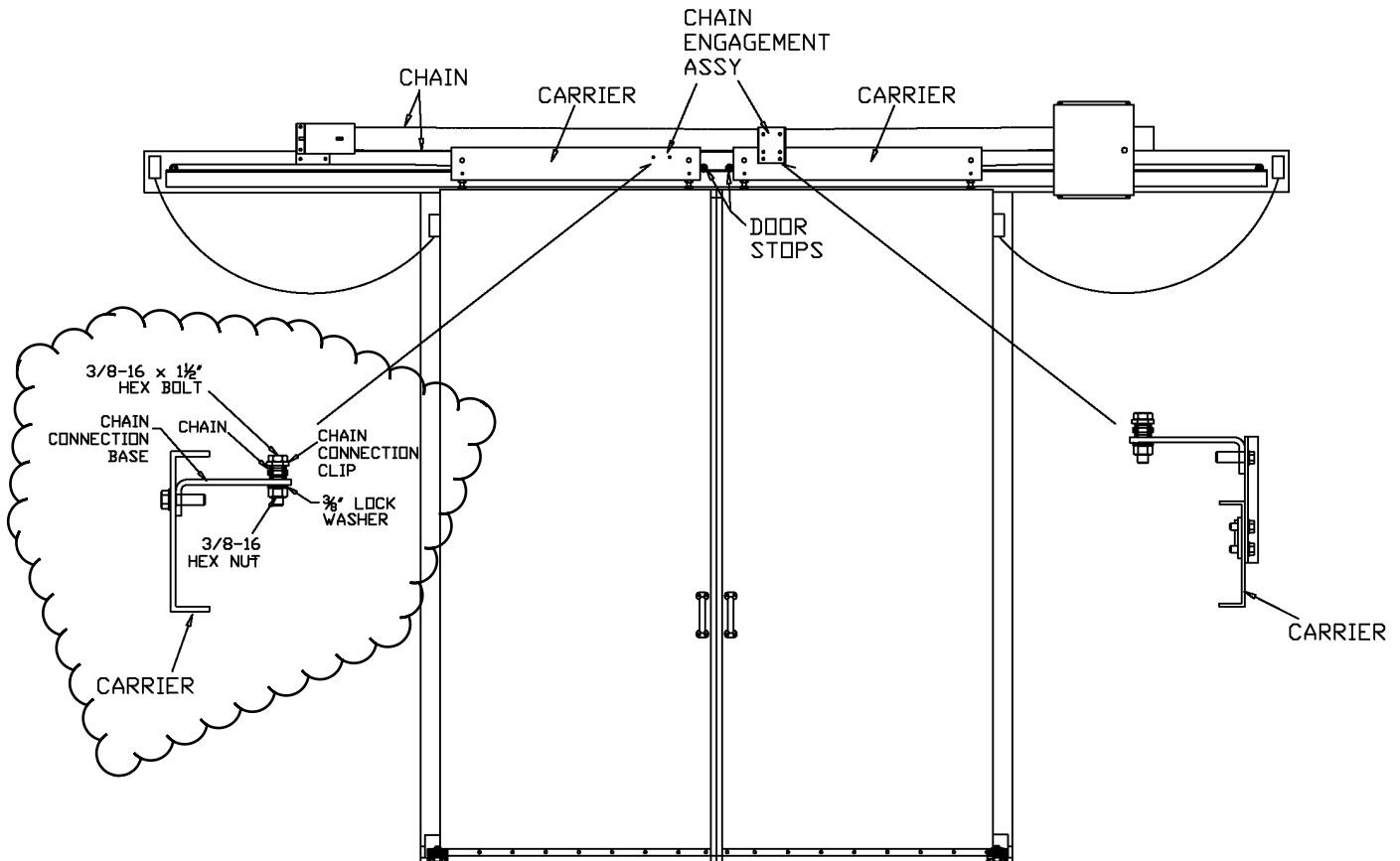
**CHAIN ENGAGEMENT**

*This Section will discuss how to properly install the chain engagement assy to the carrier.*

The illustration below shows how the chain attaches to the carrier assy. Move door(s) until carrier contacts door stops. Remove the 3/8" x 1-1/2" bolts, lock washers and nuts. Align chain between chain connection base and chain connection clip, re-bolt as shown. Ensure bolts are tight. On a bi-part door the left and right carrier should contact door stops, if chain connection base requires side adjustment loosen bolts with slotted holes, move one or both doors until carrier contacts door stops. Tighten bolts.

Note: A drive release is not required. To open or close the door manually use the bow handle on the outside of the door or the recessed handle on the inside of the door.

BI-PART DOOR

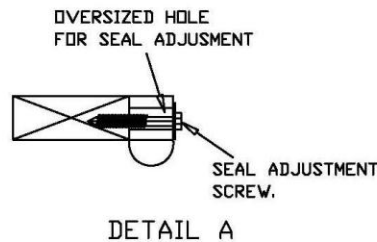
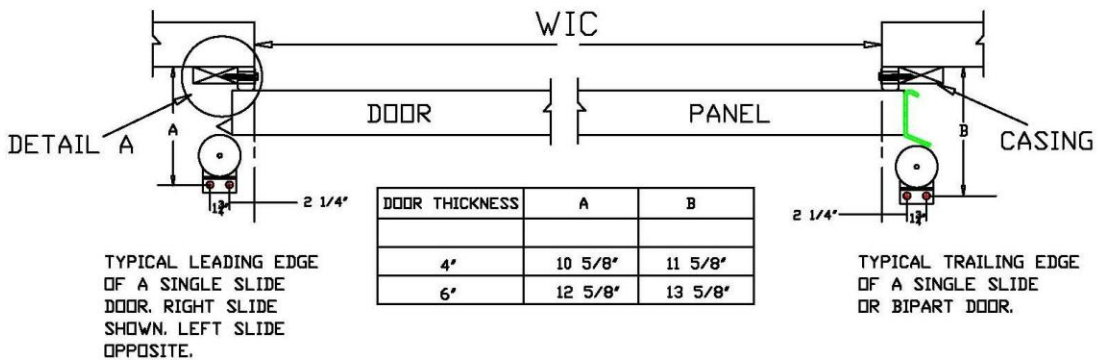


Section  
**6**

**DOOR SEAL ADJUSTMENT**

*This Section will discuss how to adjust the door seal between the vertical casings, header and the door(s).*

The door(s) panel is held against the vertical casings and the header by the track on top and a stay roller located on the bottom of the door. A reinforced door seal fills the gap between the door panel and the vertical casings, and the header. The door panel should depress the door seal approximately 1/8". If it is not then the door seal must be adjusted. To adjust the door seals, place the door(s) in closed position., loosen seal attachment screw on seal(s) not making contact with door. Pull the rubber seal towards door until a door seal compression of 1/8" is achieved. Retighten all door seal attachment screws Proceed to next location requiring adjustment.

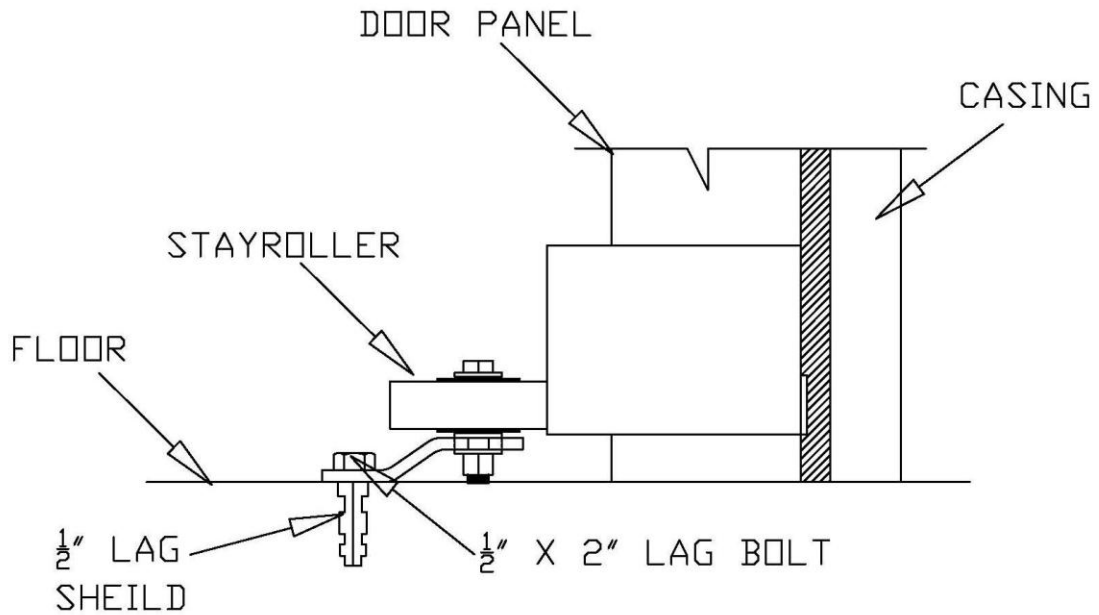


NOTE: Adjust the door seals first and then adjust or install the stay roller

## SINGLE AND DOUBLE HORIZONTAL SLIDE

Install stay roller to floor to the dimensions as shown in the illustration above, note that the dimensions for the location of the stay roller will depend on the thickness of the door.. The stay roller will hold the bottom of the door panel against the door seal.

NOTE: Do not install stay roller too tightly against door panel . The door should open with very little effort when installed correctly. A slot is provided in the stay roller bracket to allow for some adjustment.



NOTE: If seals need to be re-adjusted, re-caulk around casings and header as required.

## ELECTRICAL OPERATOR

*This Section will discuss the installation of the electrical operator control panel.*

**T**he electrical operator opens the door when given a signal and closes the door(s) either when given another signal or after a certain time has elapsed, depending on what selections are chosen at time of the order.

**The control box is NEMA 4 – water/dust tight enclosure . The following precautions must be taken to ensure that no moisture will enter box :**

**Do not bring incoming power into the top of the control box – doing so may void warranty. Bring incoming power into the side or bottom of NEMA 4 control box.**

**The incoming conduit must have a water-stop seal inside the conduit as well as a watertight connector to bring power into the box. Failure to do so may void warranty.**

**The control box must be closed and screwed tight after installation and at all times during normal operating conditions.**

### **IMPORTANT: MOISTURE ON CONTROLLER WILL VOID WARRANTY**

The system requires only a single-phase input voltage. To connect to a 3-phase line use any two-phase lines and “cap” the third line (secure to keep it out of the way) as it will not be used.

**CAUTION:** Check to see that available supply power (voltage and phase) match .

The control enclosure is either remotely located or attached to the header assembly when shipped from the factory. Either way the drive and the drive controller arrive pre-wired.

**CAUTION:** Do not obstruct the door of the control enclosure from opening with the supply wiring.

## **SINGLE AND DOUBLE HORIZONTAL SLIDE**

Install the supply wiring to the control enclosure using water and dust tight conduit. The conduit must have a water-stop seal inside the conduit as well as a watertight connector to bring power into the box. Connect primary power to leads on the incoming terminals on the two-pole fuse holder, the connections are labeled L1, L2.

**SEE WIRING DIAGRAM INSIDE CONTROL BOX.**

## ELECTRICAL PULLCORDS

*This Section will discuss the installation of the electrical pull cords, which will control the opening, and closing of the door.*

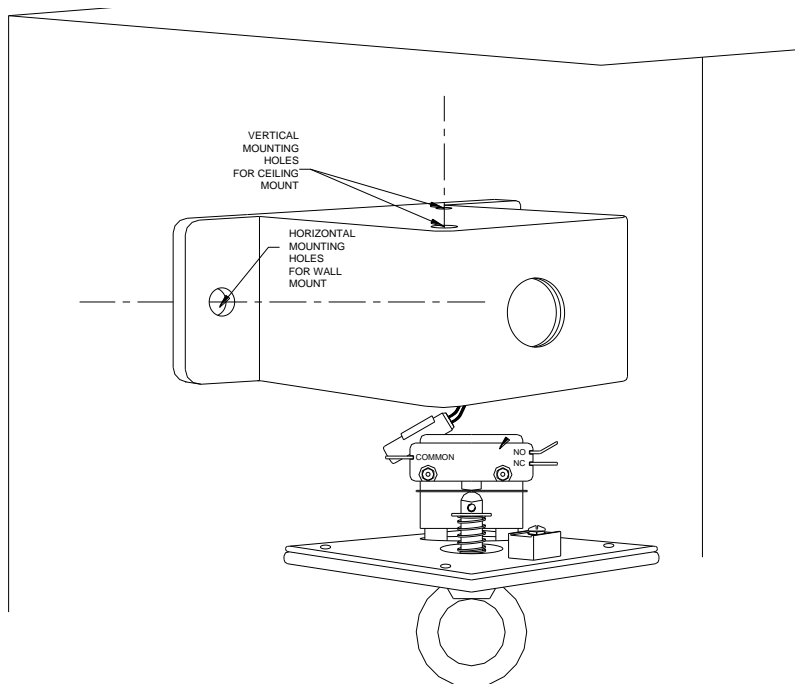
**T**here are two pull cord switches supplied with each door as a standard. On a freezer application one of these will be heated .

### Mounting the pull cord enclosure:

The heated and standard (Non-Heated) pull cords can be either ceiling mount or wall mount. To mount the Pull cord to the ceiling, remove the pull cord switch cover, and use the existing vertical mounting holes located behind the front plate as shown in the illustration below.

To mount the pull cord to a wall, use the existing horizontal mounting holes located in the center of the tabs to either side of the pull cord enclosure.

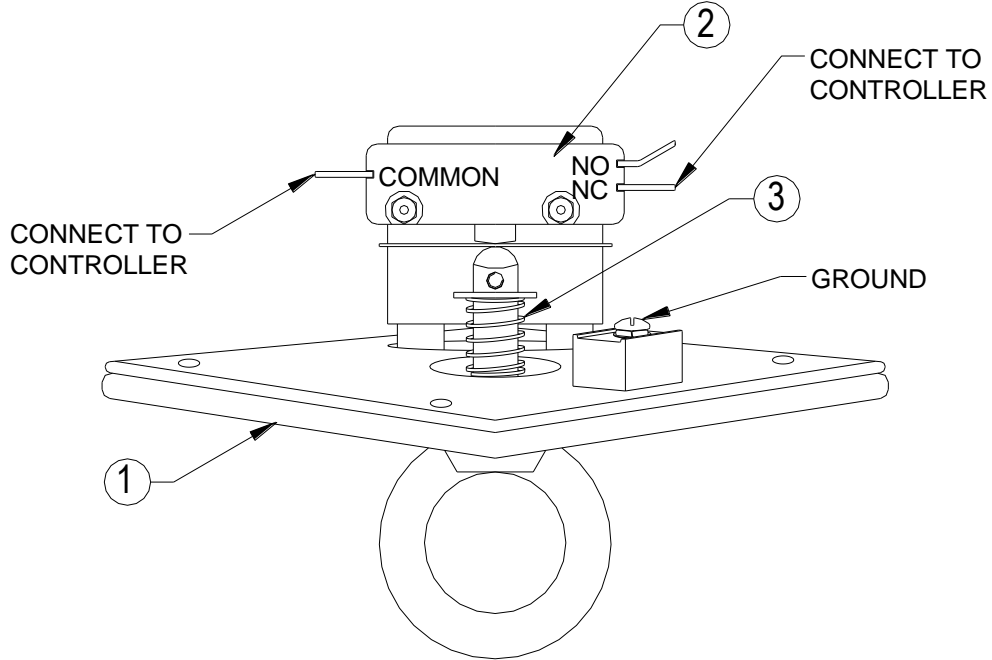
**In either mounting method the pull cord ring must be oriented in the vertical plane or the pull cord will not function correctly.**



**SINGLE AND DOUBLE HORIZONTAL SLIDE**

**Connect the Non-Heated Pull cord as follows:**

Remove cover from 4"x4" box of pull cord. Connect the 2-blue wires supplied with the pull cord switch, to the spade terminals of the micro switch N.C. & COM. Connect other end to terminal block D1-2 on controller inside control box (wiring by others).



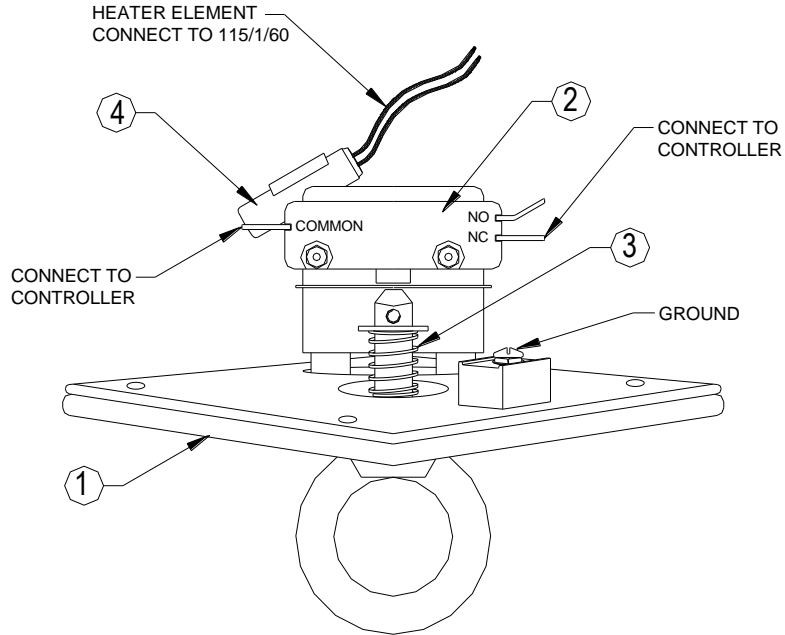


**SINGLE AND DOUBLE HORIZONTAL SLIDE**

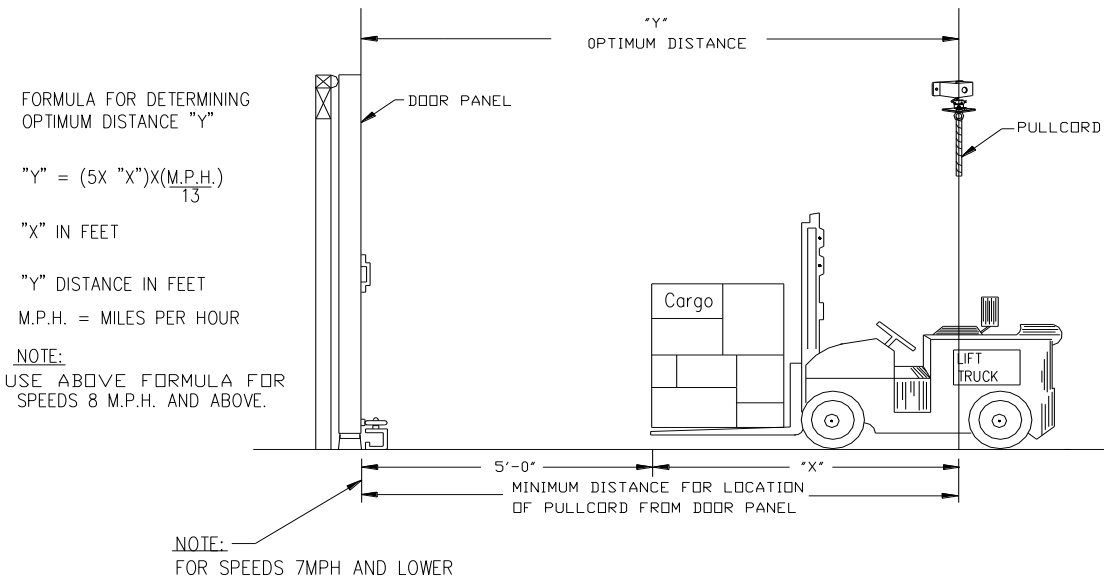
**Heated Pull cord:**

**Note: A 115-volt supply is required (by others) for the heater.**

Remove cover from 4"x4" box of pull cord. Connect 115 volt to the heater element with wire nuts provided. Connect the 2-blue wires supplied with the pull cord switch, to the spade terminals of the micro switch N.C. & COM. Connect other end to terminal block D3-4 on controller inside control box (wiring by others).



The following diagram illustrates where the recommended location for the pull cord should be. This is only a guideline and other factors may affect your installation.



For forklift speeds up to 7 MPH use the illustration above.

For forklift speeds in excess of 7 MPH use the formula to the left

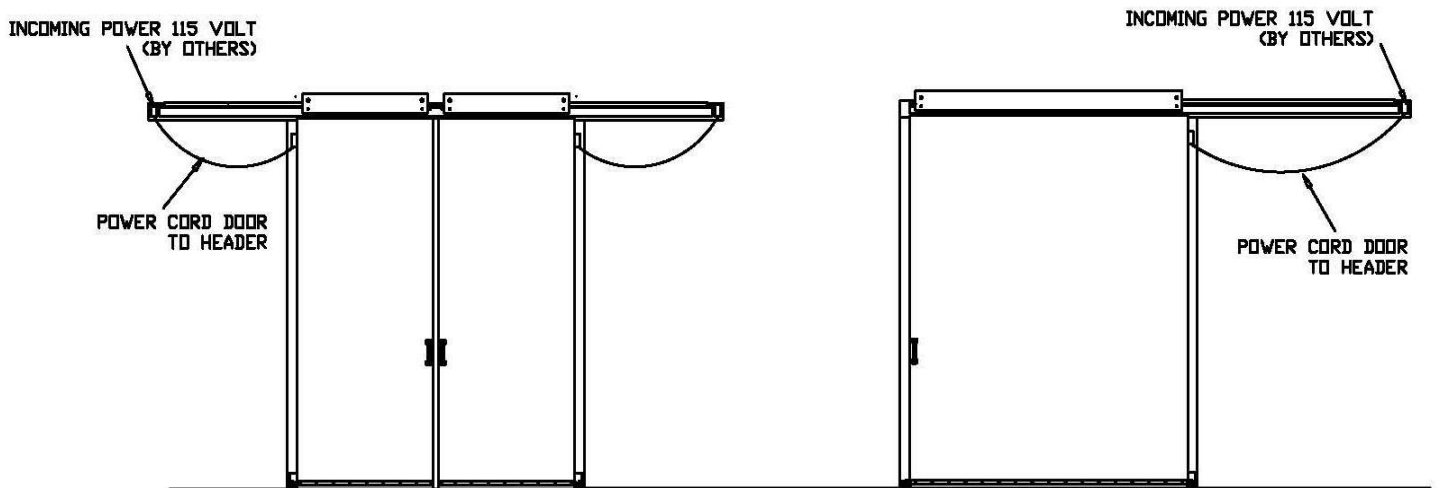
Section  
9

## HEATING CABLES

*This Section will discuss the electrical wiring of the freezer door heating cables.*

The heating cables are only installed on freezer doors, this is to provide a thermal barrier the door panel and the seals. An additional heat source may be required for excessively temperatures; optional heated seals will provide enough heat to create that thermal barrier.

Insert electrical cables on door(s) into junction box on header see illustration below. Match wires black with black, white with white and green with green. Secure with wire nuts located inside the junction box.



# Section 10

## POWER-UP & COMMISSIONING

*This Section will discuss the precautions that must be followed prior to turning on the power to the control panel and the steps that follow after the power is applied.*

The power is connected once again confirm that the supply power is the same voltage and phase as is required by the controller, the required power is usually marked on the back plate inside the control box. Confirm that the activation devices are connected to the eight-pin connector “D”. Check that the door(s) are free of obstructions or debris. Move door manually from close to full open position. Door should open and close without obstruction. Once all of these concerns are met the power to the controller can be switched on.

Once power is applied to the controller the display should read “LO-TEMP DOORS”

DOOR START UP - CALIBRATION – The first open signal (loop sensor, pull cord, etc) after power is applied the unit will activate the door calibration sequence. This will open and close the door using the close profile’s crawl speed. If the door cannot move during the calibration, or is found to be under a foot in size, the system will report a calibration fault and will shut down. Otherwise, the next time a door open signal occurs, the door will operate at full speed.

IMPORTANT – On the first full-speed close cycle, the system will record the current profile as a baseline for the future closings. It should be assured that this first high speed cycle is done with **no obstructions**, as the obstruction will not be handled and the baseline current profile will be set too high to be useful.

TIME DELAY CLOSE (TDC) – (optional) If you have optional time delay close you may want to increase or decrease the time it takes for the door to automatically close (factory default is 20 seconds). The controller is located inside the control box. On front of controller are four buttons “ESCAPE, ENTER, UP, DOWN” start by pressing UP or DOWN button, the display will show “ENTER PASSWORD”, press ENTER. Cursor will start to flash. To enter password press the buttons in the following sequence “ENTER, DOWN, DOWN, ENTER, ESCAPE, ESCAPE, ESCAPE, ESCAPE”. Display will show “CLOSE DELAY” and 20 (seconds), press ENTER cursor will flash. Using the UP or DOWN buttons increase or decrease time, press enter to lock in new value. Your new time is now entered, run door as normal.

NOTE: If after 3 minutes no buttons are pressed the controller will return to door status mode and password will have to be re-entered to make any additional changes.

## **SINGLE AND DOUBLE HORIZONTAL SLIDE**

**PARTIAL OPEN MODE (POM) DISTANCE** – (optional) If you have optional partial open mode (pom) you may want to increase or decrease the distance the door opens (factory default is 36"). The controller is located inside control box. On front of controller are four buttons "ESCAPE, ENTER, UP, DOWN" start by pressing UP or DOWN button, the display will show "ENTER PASSWORD" press ENTER. Cursor will start to flash. To enter password press the buttons in the following sequence " ESCAPE, ENTER, UP, UP, UP, DOWN, UP, DOWN". Display will show cursor "INPUT SETUP" press down button until "PARTIAL OPEN" is displayed press ENTER cursor will flash. Using the UP or DOWN buttons increase or decrease distance (value shown are in 100/inch). Press ENTER to lock in new value. Your new distance is now entered, run door as normal.

**NOTE:** If after 3 minutes no buttons are pressed the controller will return to door status mode and password will have to be re-entered to make any additional changes.

**PARTIAL OPEN MODE (POM) TIME DELAY** – (optional) You may want to increase or decrease the time it takes for the door to automatically close (factory default is 20 seconds). The controller is located inside control box. On front of controller are four buttons "ESCAPE, ENTER, UP, DOWN" start by pressing UP or DOWN button, the display will show "ENTER PASSWORD" press ENTER. Cursor will start to flash. To enter password press the buttons in the following sequence " ESCAPE, ENTER, UP, UP, UP, DOWN, UP, DOWN". Display will show cursor "INPUT SETUP" press down button until "PART CLOSE DELAY" is displayed press ENTER cursor will flash. Using the UP or DOWN buttons increase or decrease time, press enter to lock in new value. Your new time in now entered, run door as normal.

**NOTE:** If after 3 minutes no buttons are pressed the controller will return to door status mode and password will have to be re-entered to make any additional changes.

**LOOP DETECTOR** – (if applicable) See separate wiring instructions enclosed in instruction envelope.

**SAFETY REVERSE** – Your door is equipped with an electronic safety reverse, no adjustment is necessary. If when closing the door strikes an object it will reverse to full open position and not close until a signal is received from actuation device (i.e. pull cord, push button, etc.)

**TEST OPERATION UNDER POWER** – Thoroughly test door. If the door is not functioning properly, carefully re-check the installation instructions.

If you cannot resolve the difficulty call "Service Engineer" at 1-905-476-8948. Have all these instructions, "model" and "serial" number, which can be found on the control box cover label, in front of you.

**Section**  
**11**

**TROUBLESHOOTING**

*IMPORTANT – In all communications please state the door “model” and “serial” number, which can be found on the label, attached to the control box cover.*

**CAUTION: DISCONNECT FROM SUPPLY POWER  
BEFORE SERVICING.**

SYMPTON	POSSIBLE CASES	CURES
MOTOR DOES NOT RUN WHEN SYSTEM ACTIVATED BY PULLCORD, PUSH BUTTON, ETC.	MAIN FUSE BLOWN OR CIRCUIT BRAKER TRIPPED.	CHECK SUPPLY POWER FUSE OR CIRCUIT BRAKER.
	ACTIVATION SWITCH NOT WORKING (PULLCORD, PUSH BUTTON, ETC).	CHECK ACTIVATION SWITCH
	IF APPLICABLE, LOCKING DEVICE HASP IS IN LOCKED POSITION.	MOVE HASP TO UNLOCKED POSITION.
	CONTROLLER SHOWS “SYSTEMS FAULT”.	SEE “SYSTEM FAULT CODES”.
DOOR STARTS TO CLOSE BUT RE-OPENS WITHOUT BEING ACTIVATED.	DOOR HAS SENSED ADDITIONAL FRICTION ON CLOSING.	SHUT OFF POWER TO DOOR AND MANUALLY MOVE DOOR TO FULLY OPEN AND CLOSED POSITION. CHECK FOR MECHANICAL FAILURE OR OBSTRUCTION.

NOTE: WHEN POWER IS SHUT OFF AND TURNED BACK ON THE DOOR WILL GO THROUGH IT'S START UP CALIBRATION CYCLE AS DESCRIBED IN “DOOR START UP – CALIBRATION” IN THIS MANUAL.

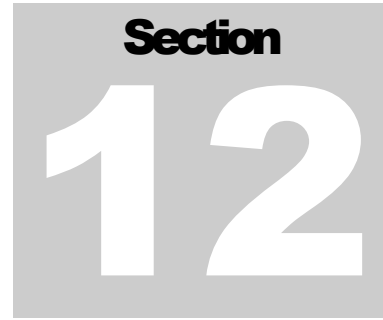
## SYSTEM FAULT CODES

When the system encounters a problem, it will report “System Fault” on the first line of the LCD and give a message indicating when the fault occurred on the second line. The following is a list of faults that can occur in the system with some of the possible causes. Whenever a fault is encountered, turning off the power for at least 30 seconds and then turning it back on will reset the system.

Calibration err - This fault occurs when calibration has determined that a bi-part door has an opening of Less than 1 foot or greater than 100 feet. Possible causes: stuck door, slipping chain, poor motor connection.

Zero position - This fault occurs when a bi-part door closes more than 2.5 feet over what it did during calibration. Possible causes: slipping chain, door was calibrated with large obstruction (skid?) in the way that did not allow for correct zero-position calibration.

Over current - This fault occurs when the system draws current over the ‘N’ command setting (Close Fault Current) when closing. This method of current control defaults to being disabled, so this message will normally never appear. This message should only appear if the ‘Z’ command value is set high and the ‘N’ value is set low.

A gray square graphic with the word "Section" in a bold, black, sans-serif font at the top. Below it, the number "12" is written in a large, white, bold, sans-serif font.

## Preventive Maintenance

### CHAIN LUBRICATION

The majority of chains used in industry suffer unnecessarily short lives. In most cases, however, the problem is not the fault of the chains but rather the method in which they are lubricated.

The current chain lubrication practice consists of applying a heavy oil or grease to the outside of the chain. While this does a nice job of lubricating the sprockets and the outside of the chain, it does little to protect the most vulnerable area of the chain: the contacting surfaces inside the pin and bushing/ plate/ roller/ hook.

The majority of chains fail from the inside. They stretch or kink up due to wear and corrosion wear inside the pin and bushing area. To lubricate them properly, the lubricant needs to be engineered to penetrate and clean the inside of the chain, clean the inside of the chain (to remove contaminants and displace any trapped water that it encounters) and leave behind a heavy film of oil, grease or solid lubricant.

Roller chain consists of a series of connecting traveling metallic bearings, which must be properly lubricated to obtain the maximum service life of the chain. Although many slow-speed drives operate successfully with little or no lubrication beyond the initial factory lubrication, proper lubrication will greatly extend the useful life of every drive chain.

The drive chain requires lubrication for six purposes.

1. To resist wear of the pin-bushing joint.
2. To cushion impact loads.
3. To dissipate any heat generated.
4. To flush away foreign materials.
5. To lubricate chain-sprocket contact surfaces.
6. To retard rust or corrosion

## **SINGLE AND DOUBLE HORIZONTAL SLIDE**

### **DRIVE SYSTEM & TRACK INSPECTION**

The drive system is nominally maintenance free, although periodic inspection for loose fasteners, and general operation is still required. Pay careful attention to setscrews and keyways as this is the area that sees the most stress.

### **STAY ROLLER ADJUSTMENT**

To assist in sealing the door each door has a stay-roller located at the bottom of the door at the trailing edge. In some door configurations, the stay-roller might be located underneath the door, running in a track fastened to the underside of the door. Check to ensure that the stay roller is securely fastened to the floor. If the stay-roller is exposed, periodically place a drop of lubricant in the center of the stay-roller. This will help ensure that the oil-impregnated bushing remains lubricated. If the stay roller is the type located underneath the door, this system utilizes a bearing sealed for life so no lubrication is required.

### **GASKET SEALS**

A bulb type gasket surrounds the perimeter of the door or opening casing. The purpose of this gasket is to provide a thermal barrier between the cold air on the inside and the warmer air on the outside of the cooler or freezer. This is achieved by trapping the air into a pocket between the door and casing. This trapped air creates a thermal break, which prevents the colder air from escaping out into the warmer air.

The bulb gaskets should be soft and pliable, when inspecting these gaskets you should check if the gaskets are filled with frost, this would make the gasket hard and unable to seal around the door perimeter. Also check for damage such as rips or tears which would allow the trapped air to escape. Any damaged gaskets should be repaired or replaced, as a leaking gasket will result in frost building up at the point where the cold air is allowed to escape.

### **HEATER EQUIPMENT (Freezer application only):**

Heaters are located throughout the door equipment when the application involves temperature below the freezing point. There is a heater located inside the doors sealing surface, which is the area around the perimeter where the bulb seals contact the door. Also a heater is installed in the pull-cord station, which is to be located inside the freezer, to prevent the same condensation from forming.

If the door operating system is located in a freezer, heaters are installed in the control panel as well as the drive motor. The heater inside the control panel prevents the air inside the control panel from condensing and settling on the electronic equipment. The heater



**SINGLE AND DOUBLE HORIZONTAL SLIDE**

mounted underneath the drive motor is there to keep the internal lubrication temperature of the gear unit high enough to allow it to remain fluid.

Preventative Maintenance	Daily Door Usage		
	Light Usage 1 to 20 Cycles	Medium Usage 20 to 100 Cycles	Heavy Usage 100+ Cycles
Chain Lubrication	Every 24 Months	Every 12 Months	Every 6 Months
Chain Tension	Every 6 Months	Every 12 Months	Every Month
Stay Roller Inspection	Annually	Annually	Annually
Bulb Seal Inspection	Annually	Annually	Annually



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