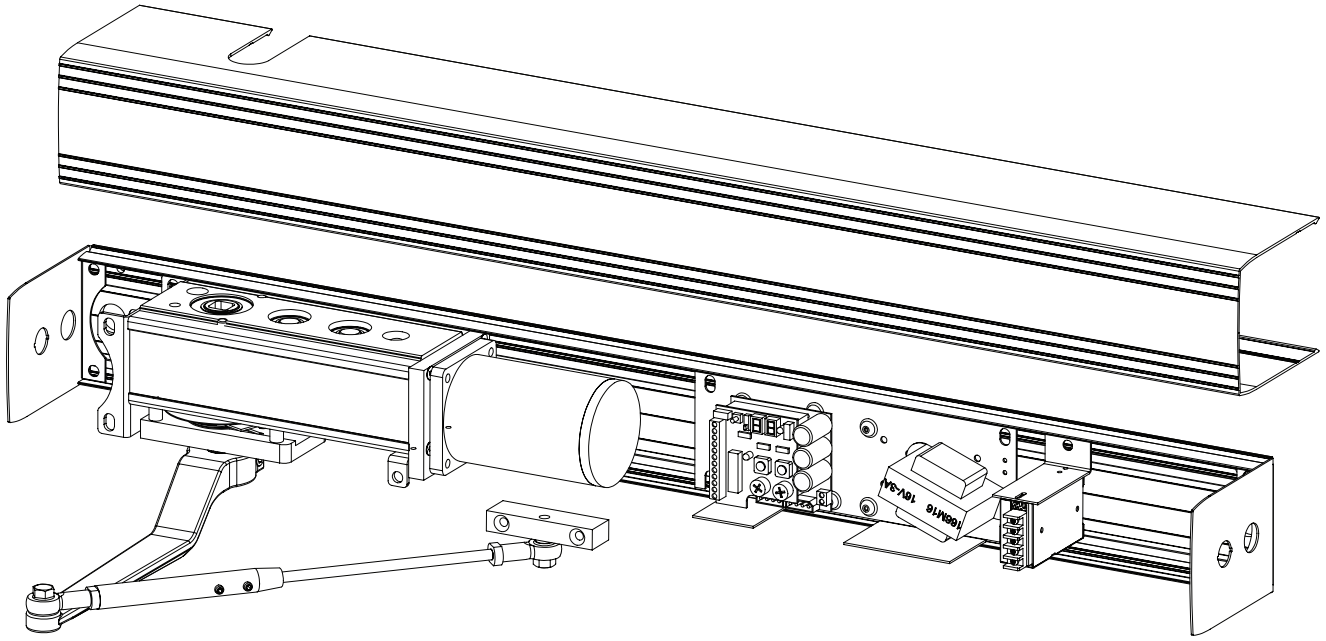
ENTREMATIC

DITEC **HA8-LP** LOW ENERGY SWING OPERATOR

Installation & Instruction Manual



READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS CAREFULLY!
FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE!

Before Installation:

- Install only on a properly operating and balanced door. A door that is operating improperly could cause severe injury. Have qualified service personnel make repairs to cables, spring assemblies, and other hardware before installing the operator.
- Remove all pull ropes and remove, or make inoperative, all locks (*unless mechanically and/or electrically interlocked to the power unit*) that are connected to the door before installing the operator.
- If the operator has exposed moving parts, ensure it is out of reach from pedestrians.
- Do not connect the door operator to the source of power until instructed to do so. Connection of the high voltage supply should be done by a qualified professional and within the guidelines of the enforced local electrical codes.
- For products having a manual release, instruct the end user on the operation of the manual release.
- The technician must test all safety features before turning over the equipment to the customer.

Ditec ENTREMATIC

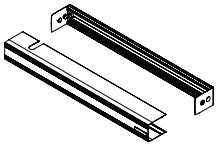
Entrematic Canada Inc.
Toll Free: 1-877-348-6837
info.ditec.ca@entrematic.com
www.ditecentrematic.ca

Entrematic USA Inc.
Toll Free: 1-866-901-4284
info.ditec.us@entrematic.com
www.ditecentrematic.us

Table of Contents

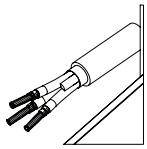
Step 1: Remove Header Cover

(Section 2.1)



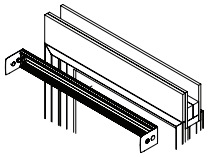
Step 2: Locate & Drill Power

(Section 2.1)



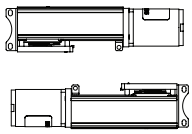
Step 3: Mount Header

(Section 2.1 - 2.2)



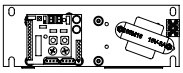
Step 4: Install Operator

(Section 2.2 - 2.3)



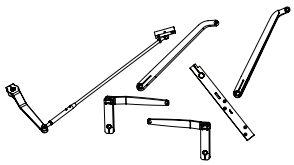
Step 5: Place Control Board

(Section 2.4)



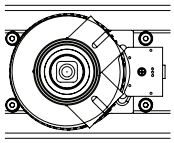
Step 6: Install Arm

(Section 3.0)



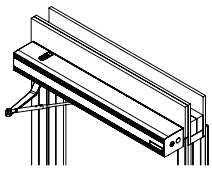
Step 7: Electronics Tuning

(Section 4.0 - 8.0)



Step 8: Clean/close Header

(Section 11.0)



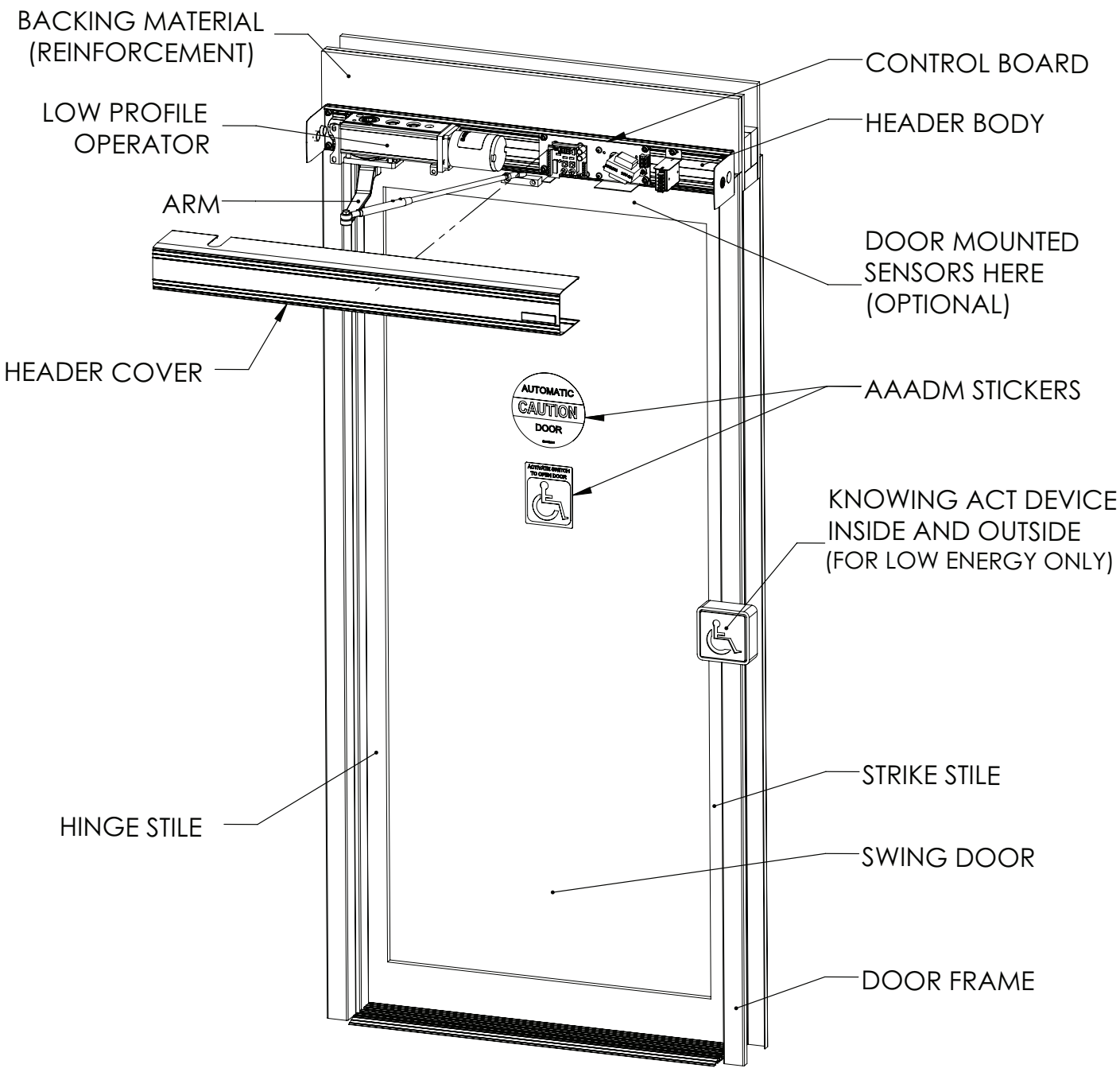
Step 9: Place AAADM Stickers

(Section 11.2)

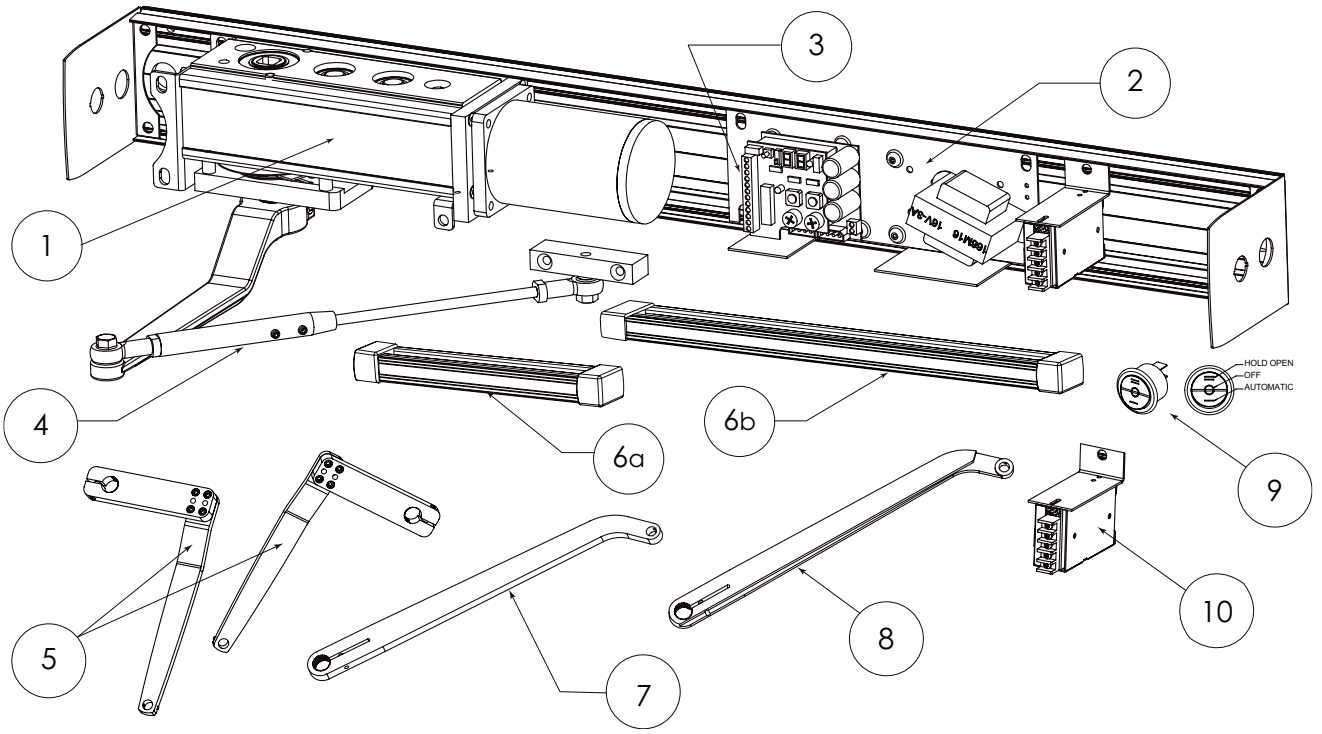
Step 10: Install Sensor(s) / Knowing Act Devices

(Section 11.1)

Completed/Typical Automatic Door Installation



1.1 Replacement Parts



Replacement Parts			
Item	Category	Part No.	Description
1	Operator	WL-PA03	LP Operator (Non-Handed)
2	Control Board	W7-150	Analog Control Board
		W7-160	Digital Control Board
3	Fuse	W5-421	Fuse 3AMP Analog Board
		W5-422	Fuse 3AMP Digital Board
4	Push Arm	W7-200	Complete Push Arm-Clear
		W7-205	Complete Push Arm-Bronze
5	Z-Arm (Pull)	W5-506C	Z-Arm RH - Clear
		W5-505C	Z-Arm LH - Clear
		W5-506B	Z-Arm RH - Bronze
		W5-505B	Z-Arm LH - Bronze
		W5-508C	Extended Z-Arm RH - Clear
		W5-507C	Extended Z-Arm LH - Clear
		W5-508B	Extended Z-Arm RH - Black
		W5-507B	Extended Z-Arm LH - Black

Replacement Parts			
Item	Category	Part No.	Description
6a	Pull Arm Track - Short *(for Z-arm)*	W5-550	Pull Track Assembly - Clear
		W5-555	Pull Track Assembly - Bronze
6b	Pull Arm Track - Long *(for Universal Arm/ Center Spindle)*	W5-551	Pull Track Assembly Long - Clear
		W5-556	Pull Track Assembly Long - Bronze
7	Universal Arm	W5-512C	Universal Arm - Clear
		W5-512B	Universal Arm - Bronze
8	Centre Spindle Arm	W5-510C	Center Spindle RH - Clear
		W5-511C	Center Spindle LH - Clear
		W5-510B	Center Spindle RH - Bronze
		W5-511B	Center Spindle LH - Bronze
9	Rocker Switch	WL-Rocker Switch	ON/ OFF/ HOLD OPEN 3 position switch
10	Power Supply Kit	WL-PWRKIT	RS-25-24 Power Supply Kit

1.2 General Information

The HA8-LP Operator is a complete swinging door solution for push, pull, surface applied installations. The header contains the Driving system (Motor), Torque production (Gearbox), and a Control system to interlink the two.

The HA8-LP Operator ensures all-around safety. It can be combined with the full range of safety units, such as presence and motion sensors. It is easy to install for both new construction and retrofit applications.

- All wiring must conform to standard wiring practice in accordance with national and local wiring codes.
- Door must swing freely through the entire opening and closing cycle before beginning of installation. Typically, doors are hung on hinges 5” (127mm) max. width or 3/4” (19mm) offset pivots.
- An incorrectly installed or improperly adjusted door operator can cause property damage or personal injury. These instructions should be followed to avoid the possibility of misapplication or maladjustment.
- All dimensions are given in inches (millimeters), unless otherwise noted.

Templating Information

- Before installation, verify door frame is properly reinforced and is well anchored in the wall.
- Concealed electrical conduit, and concealed switch or sensor wires should be pulled to the frame before proceeding.

Suggested Fasteners for Frame

- #14 x 2-3/4” (70mm) long sheet metal screws for wood.

Suggested Fasteners for Door

- #12, #14, Wood screws, Sheet Metal screws, Self-tapping screws of varying lengths depending on applications.

The fastener components listed above are merely suggestions. A technician should use their best discretion to determine what components they’ll need to complete the job.

Shipping inspection

Verify that the order was shipped complete and correct, including model number, door swing, color, and header width.

- **If any of the above items are not correct, do not attempt to install until all conditions are correct**
- **Report any incorrect items to the general contractor immediately.**

NO CLAIMS FOR SHORTAGE WILL BE ALLOWED UNLESS REPORTED WITHIN 24 HOURS OF RECEIPT OF SHIPMENT.

Safety Precautions
- Do not climb or put weight on any door or header parts
- Do not let children play with the operator or the electrical board
- Keep remote controls away from children
- Keep all power off to the unit, when performing any work or maintenance

To avoid bodily injury, material damage and malfunction of the product, the instructions contained in this manual must be strictly observed during installation, adjustment, repairs and service etc. Training is needed to carry out these tasks safely. Only Entrematic-trained technicians should be allowed to carry out these operations.

Compliance Codes and Standards
The operator complies with the following codes and standards:
- UL STD.325 & ANSI/BHMA STD. A156.19; Fire rated UL STD. 10 (b); UL STD. 10(c); NFPA STD. 252
- CAN/CSA STD. C22.2 NO. 247 & CAN/ULC STD. S104

It is the responsibility of the final installer and/or installation company, to certify that the final completed operator is installed in accordance with local building codes and applicable laws.

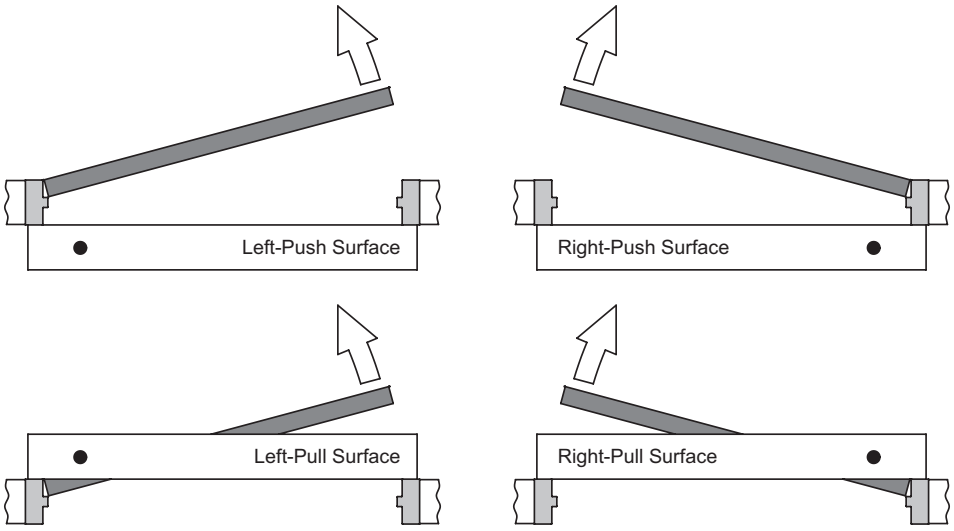
1.3 Technical Specifications & Required Tools

Model	Ditec HA8 LP
Dimensions	4.125” W x 5.125”H
Weight	Approx. 45 lbs
Power Supply	115 ± 5VAC, 60Hz, 3A
Consumption	DC16V/ 3 AMP
Motor	1/8 hp, 16VDC, 3A (Standard) 1/4 hp, 16VDC, 3A (Optional)
Rated Operation	Continuous opening and closing cycles
Manual Opening/Closing Force - *during power failure*	15 lbs
Door Opening/Closing Speed & Force	Adjustable, see section **10.0 ADA ADJUSTMENTS**
Operation - *during power failure*	Low resistance when opened by hand. Door closes by spring.
Hold Open	Pulsed Energy to Motor. No overheating. Continuous hold open
Operating Environment	Ambient temperature -4F to +120F (-20C to +50C) *No condensation or icing*
	Ambient humidity 30% to 85% RH *(No hazardous materials must be present in the atmosphere)*

Required Tools for installation:
- Allen Wrench Set
- Power Drill and Drill Bits
- Level
- Tape Measure
- Wire Stripper
- Screwdrivers: Flat, Philip, 5/16” Hex. Nut
- Additional Fasteners Depending Surface
- Shims
- Hand Saw/ Power Saw

1.4 Door Handings

The handing and types of each operator are shown in the figure below; the black dot indicates the spindle location.
The HA8-LP Operator can be used for pull side and push side installation, on the top door jamb and in header applications.



1.5 Consideration of Surroundings

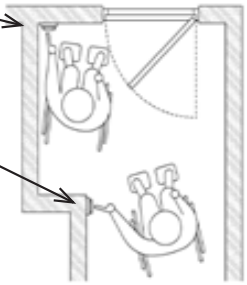
Floor Space Requirements for Wheel Chair Maneuvering - Americans with Disabilities Act (ADA)
The owner may request the activation device location; however, the press switch must be in view of the door and not directly on the door or frame. Please refer to ANSI 117.1 Safety Code for further guidelines on switch requirements.

Activation switches shall be at minimum height of 36” and maximum height of 48” from finished floors.

Individual who uses wheelchair needs a minimum of 48” clearance to the door swing for doors in series.

Position# 1
Minimum Two Feet (2’)
from door latch

Position# 2
Minimum Five Feet (5’)
from door face



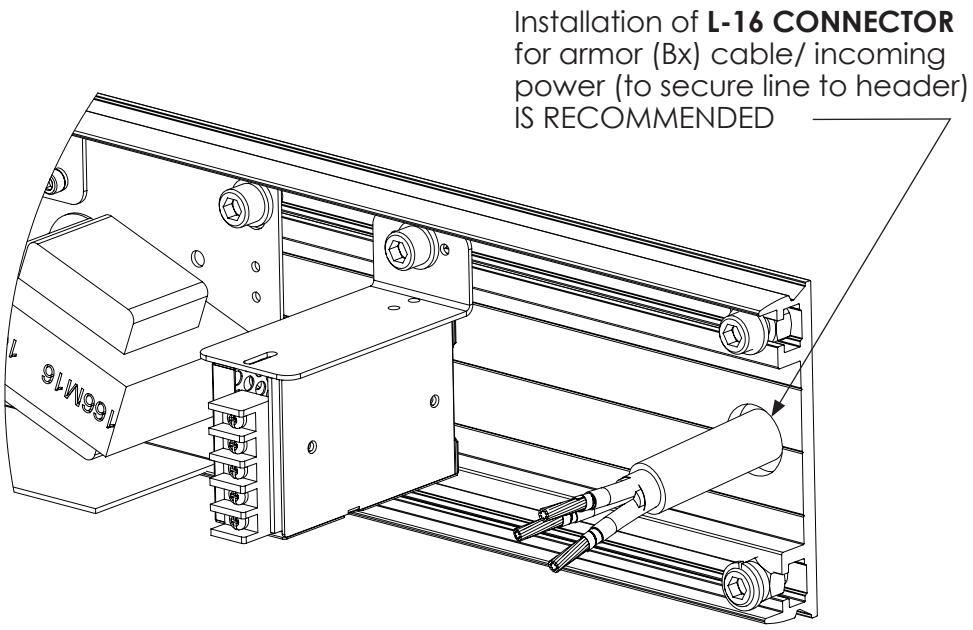
External and Internal Factors

Door Condition	Door must move easily open and close (latch) without excessive force; weather stripping and threshold must not interfere with door movement.
Reveal	For out swing (Push) doors, the reveal must be within the range of 0” to 14”. For in swing (Pull) doors, 0” to 4” for special reveals is allowed – for all others consult factory.
Wind	When installing on a door in a strong wind condition area, special adjustments should be made to the arm and doorstop position, to increase the spring tension.
Power/Control Wires	Check that the electrical feed, all conduits, and electrical junction boxes (for push plates or other activation devices, if required) are correctly located in accordance with final approved shop drawings and within the guidelines of the enforced local electrical codes.

1.6 Electrical

The 115±5VAC supply lines are connected to the black primary wires coming from the transformer and the ground wire is attached to the operator header box. Mount the ON/OFF/HOLD OPEN switch in the header end plates to the latch side of the unit (or closest to the control board).

The control board settings have been pre-set prior to shipment. It will be necessary for the door operator to be functional while adjustments and settings are made. A black push actuator is mounted on the upper left corner of the circuit board to ease in the adjustment process. Power up the unit, push an activating device and check to make sure that the spline pinion drive rotates in the correct direction. Keep all wires away from moving parts and sharp edges that may cut into the outer casing of the wires.



THE GROUND WIRE FOR THE INCOMING 115±5VAC POWER AND THE SYSTEM GROUND WIRE CANNOT SHARE THE SAME GROUNDING STUD. GROUND THE INCOMING 115±5VAC ACCORDINGLY.

- Installation of any extra wiring for controls or accessories into the header unit shall be secured and away from any moving parts.
- If the motor is not plugged into the circuit board, there is no resistance against the spring when manually opening the door. The door or arm will close very quickly if opened.
- If an electrical access hole is added or knocked-out of the end plates, code approved electrical transfers must be used. Hole cannot be knocked out and unfilled.

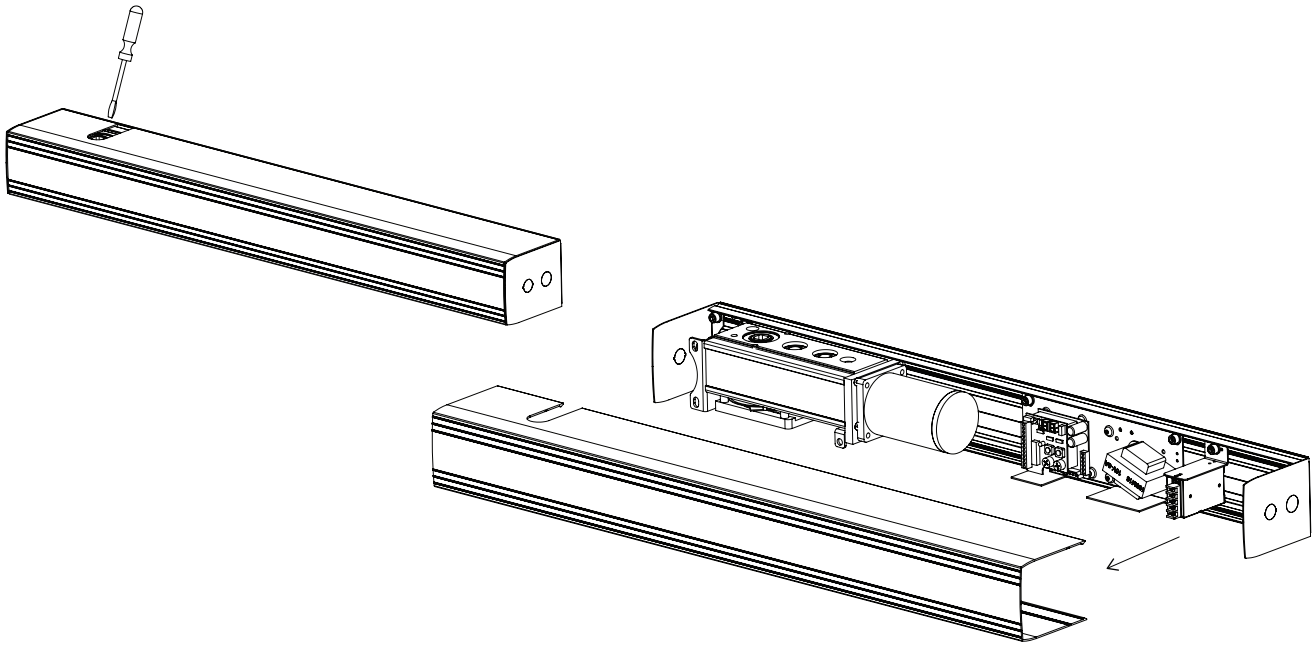
2.1 Pre-Mounting Header Box Instructions

Disassemble parts for installation

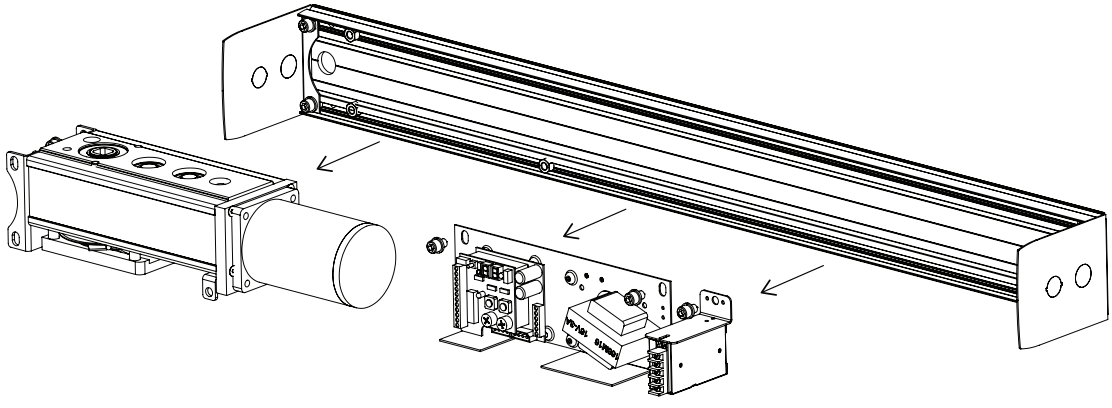
Remove the cover from the assembly by gently prying with a screwdriver. Once the snaps are clear, pull the cover outwards with minimal effort. Carefully set the cover in a location where it will not be damaged.

Power supply may be pulled into the header at the same time the header assembly is positioned. Make sure all power is turned off before handling the supply wires. This should be done by a certified electrician and within the guidelines of the enforced local electrical codes.

Be sure there is proper support in the wall to secure the header at the vertical jambs, and behind the header at intervals between the vertical jambs. Secure the header box to the top of the door frame with the appropriate fasteners as indicated below.



Remove the motor/gearbox and control board from the back plate. Make through holes on the back plate for mounting header where appropriate.

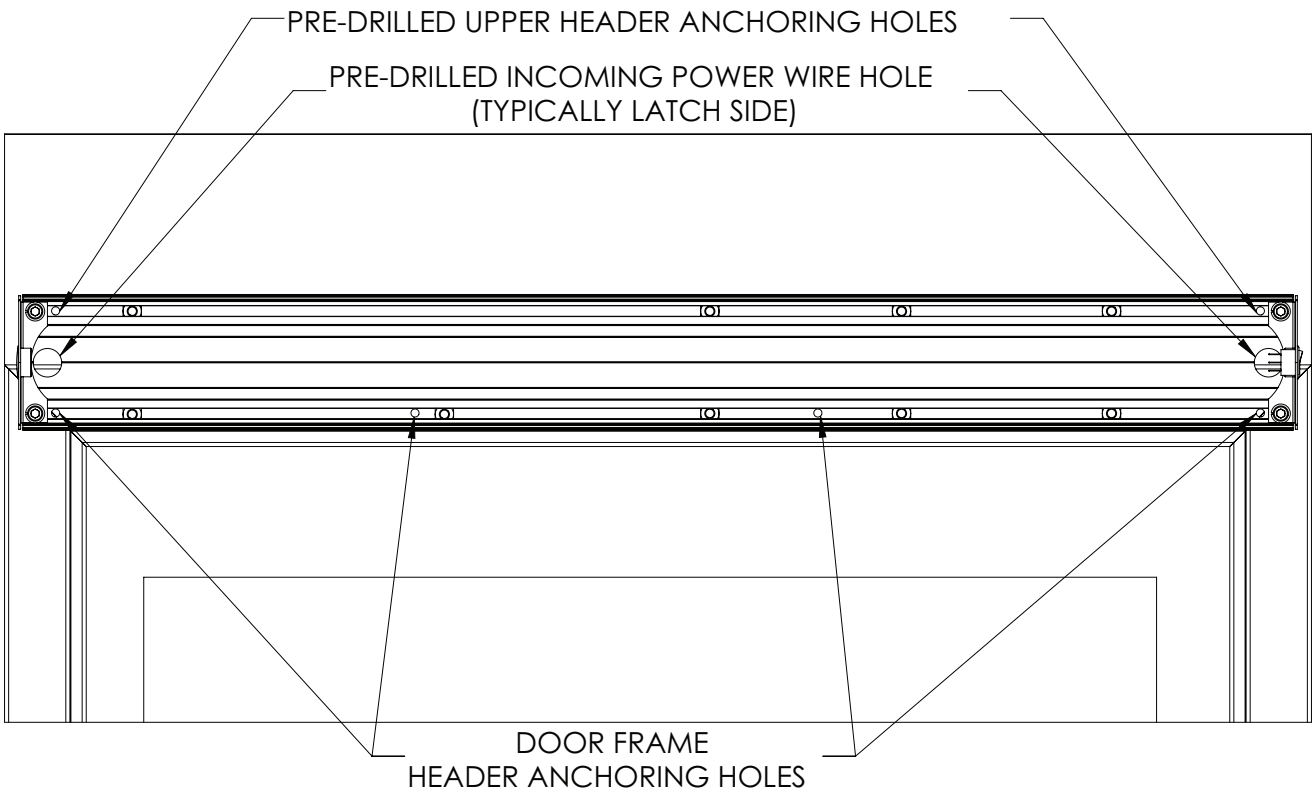


STEPS

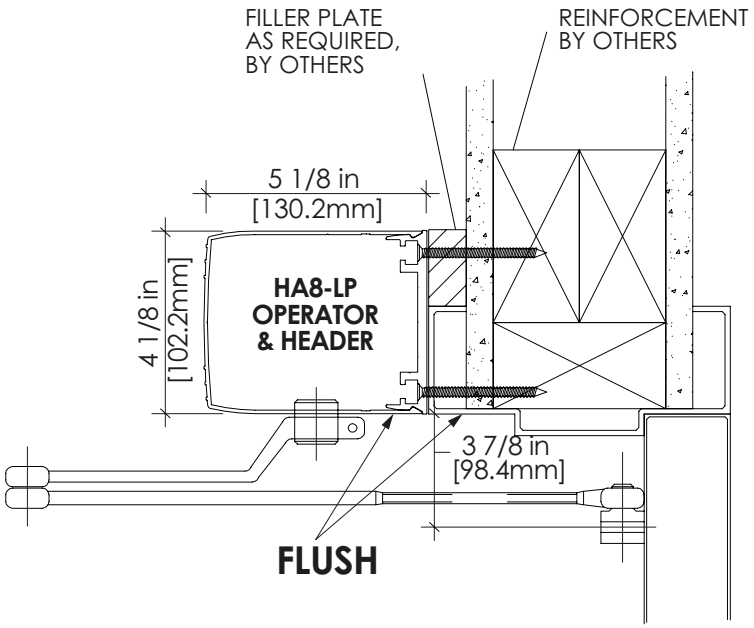
1. Verify that the operator is the correct orientation. **Left Push, Right Push, Left Pull** or **Right Pull**
2. Holes are provided for the high voltage wires. Hold the back plate in position and mark the wall. If the hole is not at a convenient location, you can drill the backer plate to suit.
3. Anchor the back plate to the wall with minimum of six (6) - #14 x 1” Pan Quad Type A screws (provided). You may need to provide other screws if your installation requires it.
4. Use two (2) screws to fasten the back plate directly to the doors vertical jambs on the hinge side.

Holes can be made anywhere in header to secure. All holes MUST be drilled into substantial support (studs, blocks, framing, etc.). This diagram may not reflect your installation.

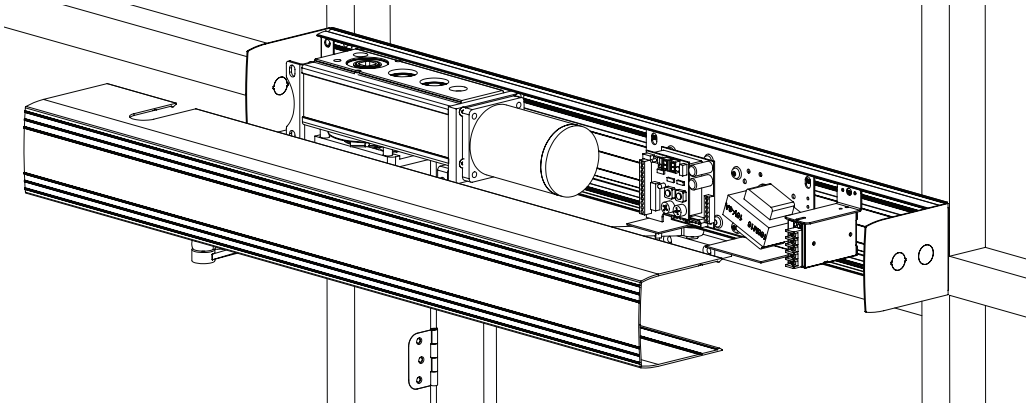
TYPICAL THROUGH-HOLE INSTALLATION



VERTICAL SECTION



5 Add additional screws to fasten the header back plate to the door frame approximately 12” to 16” apart. The header needs to be strong enough to support 200 lbs.



6 When installing a support plate for the full width of the door frame, fasten an additional two (2) screws to the vertical jambs on the strike side of the door.

7 Install the Spindle into the motor/gearbox.

8 • Once the header back plate is in place, install the motor/gearbox and control board to the header back plate (see Section 3.0).

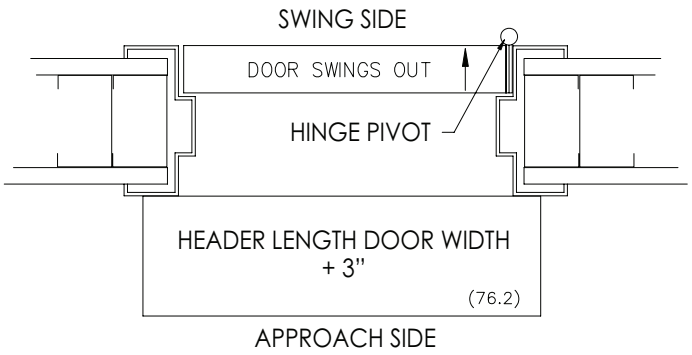
• Slide the nuts (supplied with the operator) to hold the motor/gear box and control board along the 2 parallel tracks on the back plate.

• Fasten the bolt to hold the motor/gear box and control board. The motor/gearbox needs to be installed so that the center of the spindle is 5” (12.70 mm) from the end plate

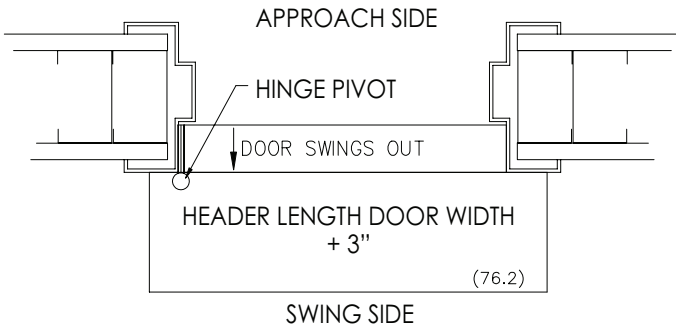
2.2 Operator Layout and Handing

HORIZONTAL SECTION

PUSH HEADER

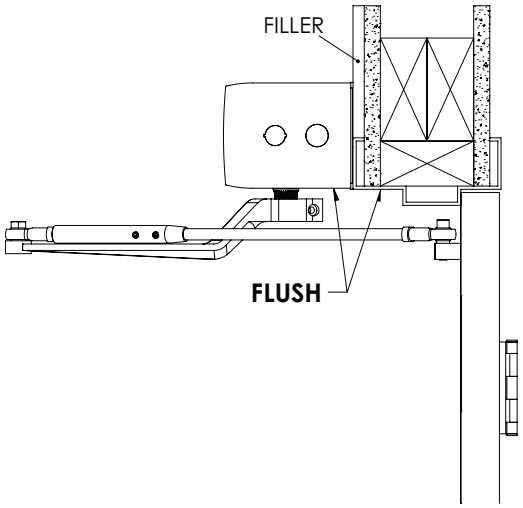


PULL HEADER

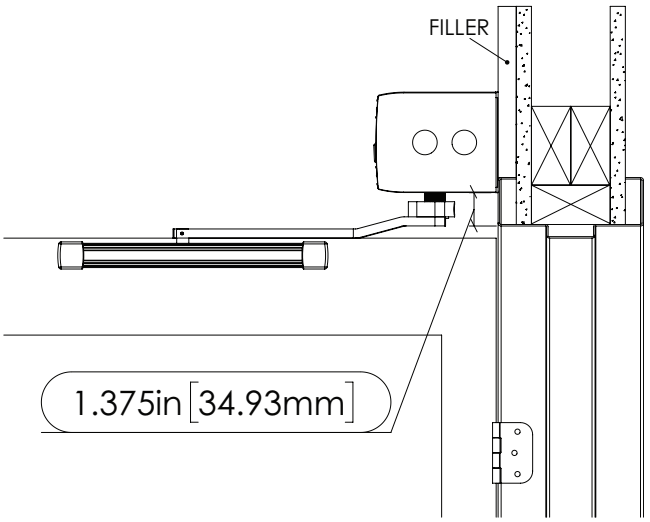


VERTICAL SECTION

PUSH HEADER



PULL HEADER



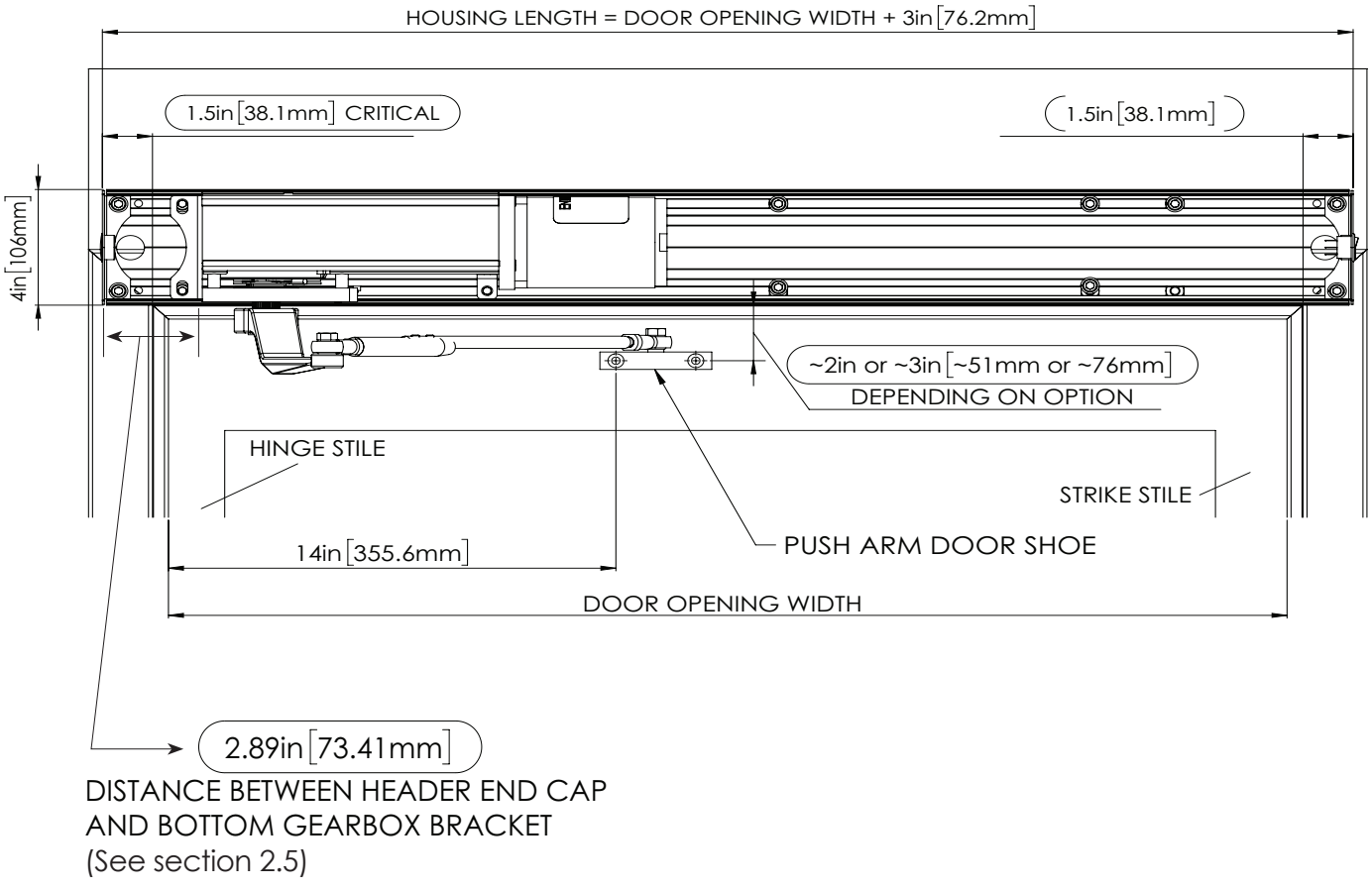
For Universal Arm application, please see section 3.3

Push Header

The Header Box on push installations is mounted flush to the bottom of the doorjamb header. It may require solid backing material to compensate for the thickness of the door frame. Before fastening Header Box to the door frame, ensure that your access holes for high and low voltage wires match. Header box should be referenced to the hinge side of the door. For most applications, the header is equal to door opening plus 3". This allows for a 1-½" space on either side of the Header Box to anchor the Header Box properly to the frame. The Header Box should be anchored with a minimum of six (6) - #14 x 1" Pan Quad Type A screws (provided.)

- 2 screws use at either end (1/2" in from end plate) to fasten directly to the doors vertical jambs.
- 2 screws fasten the Header Body to the bottom of the door frame approximately 10" in from either end. The header should support 200lbs.

Header MUST be installed 1.5 inches from hinge side for all Push/ Pull installation.



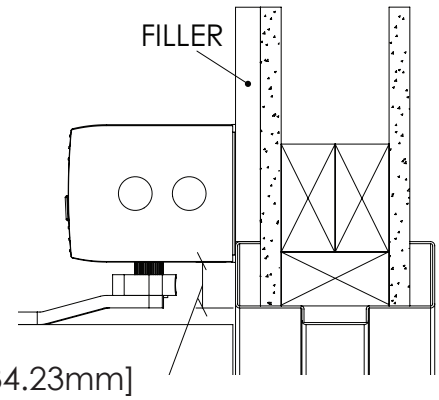
Pull Header

Ensure before fastening Header box to the door frame that your holes for high and low voltage wires match. Header box should be referenced to the hinge side of the door and 1 3/8" above the bottom of the door frame (see figure below). For most applications, the header is equal to the door opening plus 3".

This allows for a 1 1/2" space on either side of the Header Box to anchor the Header box properly to the frame. The Header box should be anchored with a minimum of 6 -#14 x 1" Pan Quad Type A screws (provided), but will also depends on what is being screwed into.

- 2 screws use at either end (1/2" in from end plate) to fasten directly to the doors vertical jambs
- 2 screws fasten the Header body to the bottom of the door frame approx. 10" in from either end. The header should support 200lbs.

Header on pull applications must be mounted so the main drive pinion safety washer and machine screw are above the top of the door. This is to ensure the spindle does not obstruct the swing path of the door.

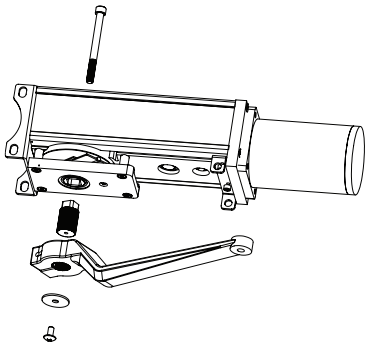


2.3 Handing Modification - Left to Right (and vice versa)

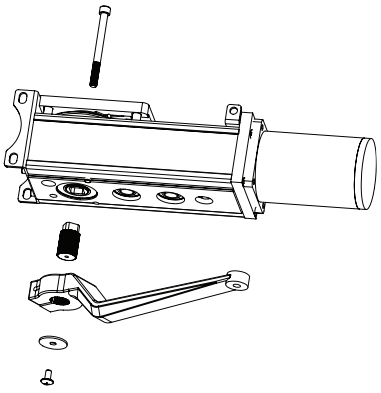
Prepare the Operator, Arm and Spindle

1. Invert the entire operator assembly 180 degrees
2. Remove drive shaft (spindle) from motor gear box assembly (See changing position of drive shaft)
3. Re-attach drive shaft (spindle) to opposite side of motor gearbox assembly
4. Detach wire connections from operator to control board
5. Remove control assembly from the base and rotate 180 degrees
6. Replace control and socket screws
7. Connect wire harness (see wiring)
8. Fully tighten all bolts
9. Insert spline shaft on the operator (depended on push or pull application and spindle rotation)

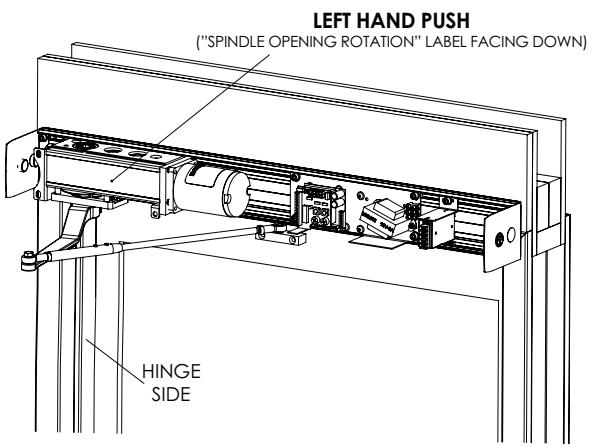
Left Hand Installation
(Label is down, facing the floor)

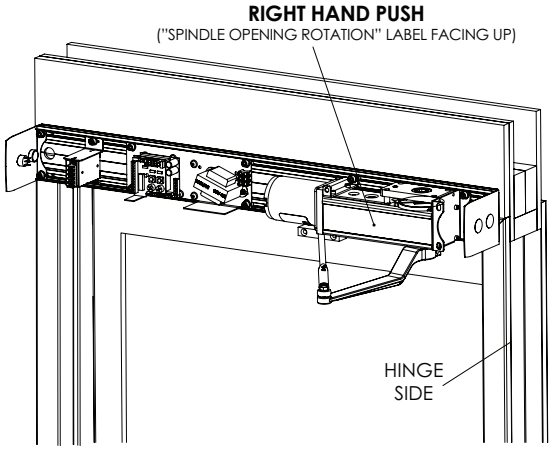


Right Hand Installation
(Label is up, facing the ceiling)



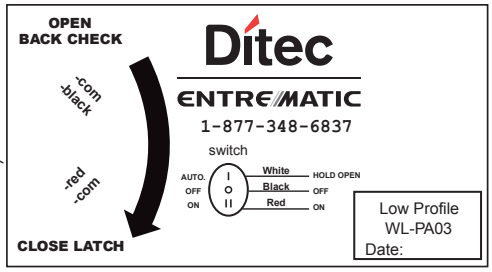
Operator placement





Before you begin, note that direction of the Open/Back Check arrow will indicate the direction the unit will open when activated. As mentioned earlier, if the operator label is facing down to the floor, then the handing is Left hand Push/Pull. If the operator label is facing up to the ceiling, the handing is Right hand Push/Pull.

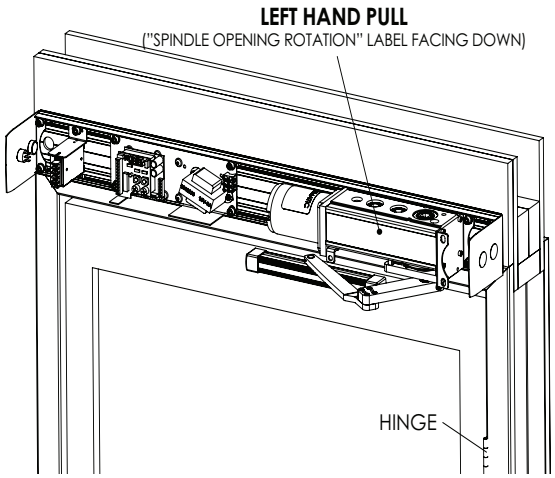
Spindle Opening Rotation Label

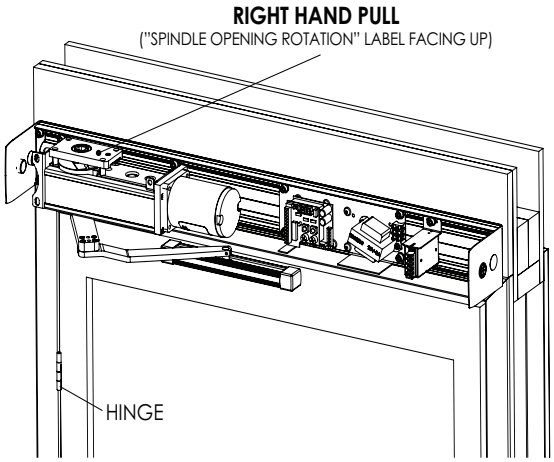


Must have arm to complete transition

Handing Modification Steps

1. Remove gear box assembly from mounting plate.
2. Disconnect wire harnesses and switch wiring from control (see wiring).
3. Re-attach gear box to opposite side of mounting plate and rotate mounting plate. The arrow should be pointing upward. This indicates the handling is Left Hand Pull.
4. Connect wire harness and switch wiring (see wiring).
5. Fully tighten all bolts.

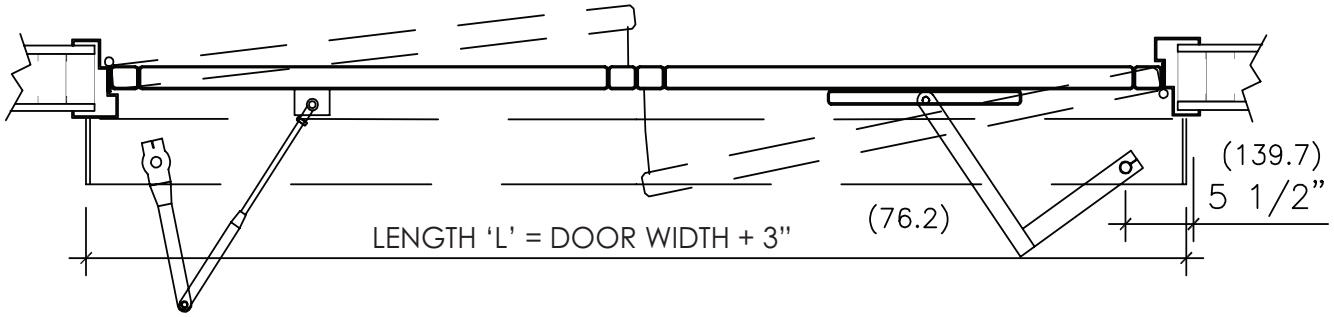




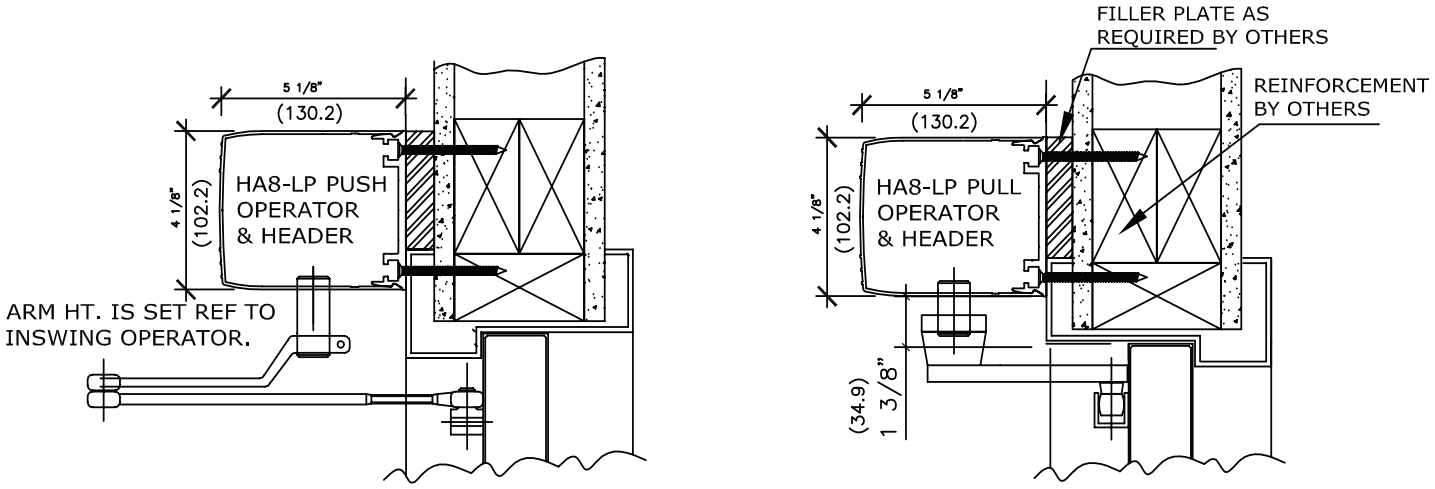
2.4 Double Egress Header

Double Egress Operators has PULL type and PUSH type operator in the same housing, the header must be mounted 1 3/8” above the door frame. For PUSH type operator, arm clearance issues may arise. To ensure the arm clears any existing doorstops, mount the arm according to the diagram below marked Push Config.

See Section 3.1 to change the Push arm configuration.



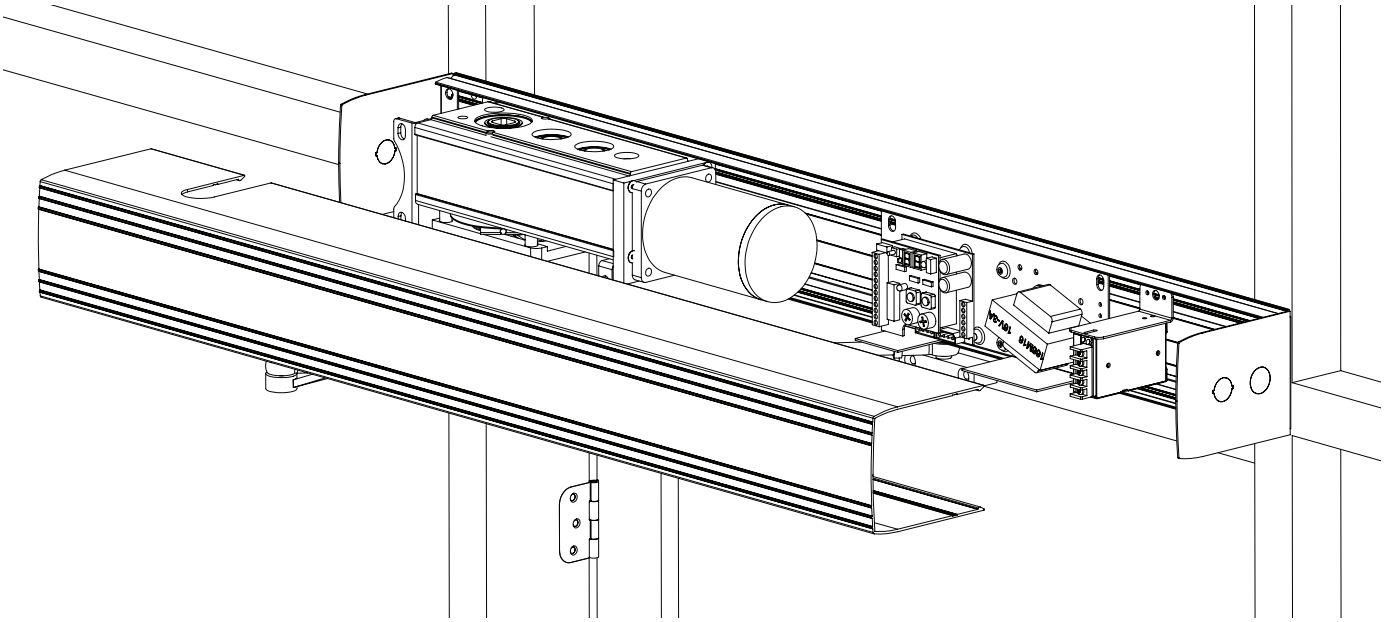
HORIZONTAL SECTION



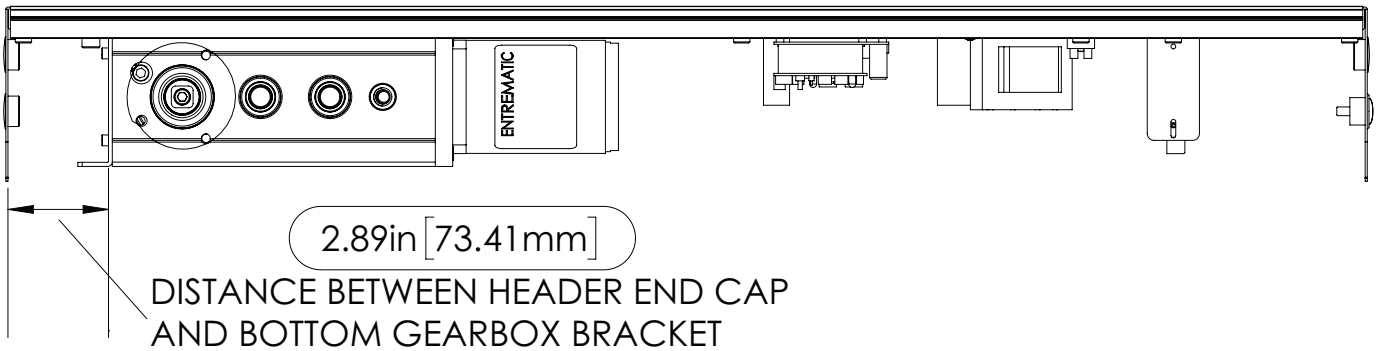
VERTICAL SECTION

2.5 Gearbox Installation

Place the board in the header, beside the motor of the gearbox. The control board will be on the opposite side of the gearbox motor. For example, in a **Right Hand (Push) operator**, the control box is left of the gearbox motor.

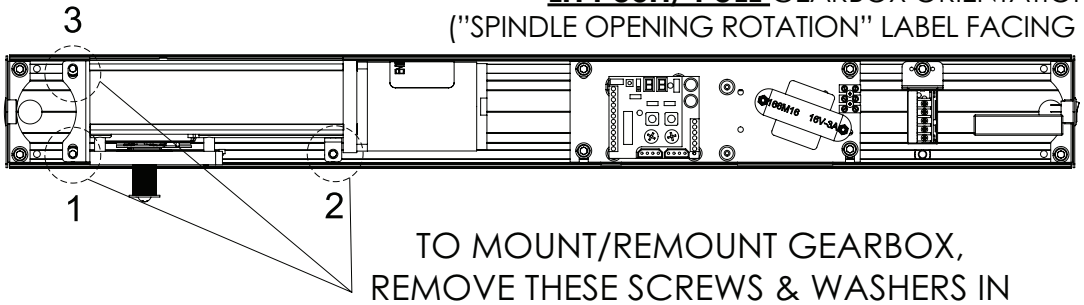


LP GEARBOX MOUNTING DISTANCE



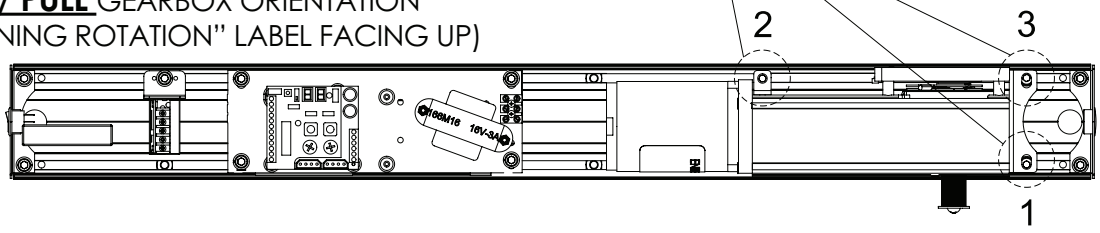
LP GEARBOX INSTALLATION/REMOVAL

LH PUSH/ PULL GEARBOX ORIENTATION
("SPINDLE OPENING ROTATION" LABEL FACING DOWN)



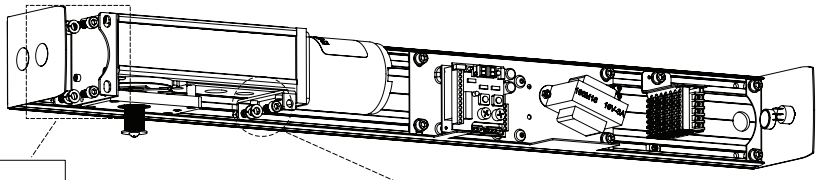
TO MOUNT/REMOUNT GEARBOX,
REMOVE THESE SCREWS & WASHERS IN
NUMERICAL ORDER.

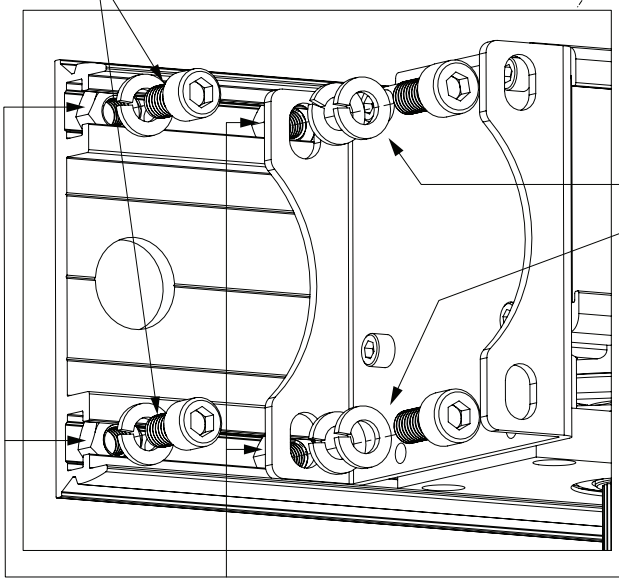
RH PUSH/ PULL GEARBOX ORIENTATION
("SPINDLE OPENING ROTATION" LABEL FACING UP)

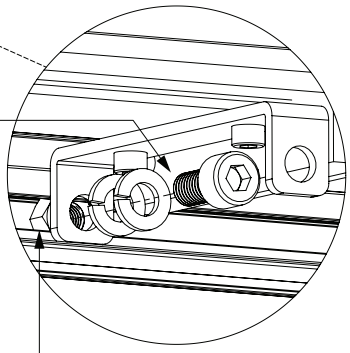


LP GEARBOX FASTENER DETAILS

M8x12 SOCKET CAP SCREW
HOLDS OTHER COMPONENTS TO HEADER
WITH ONE (1) 5/16" LOCKER WASHER EACH.





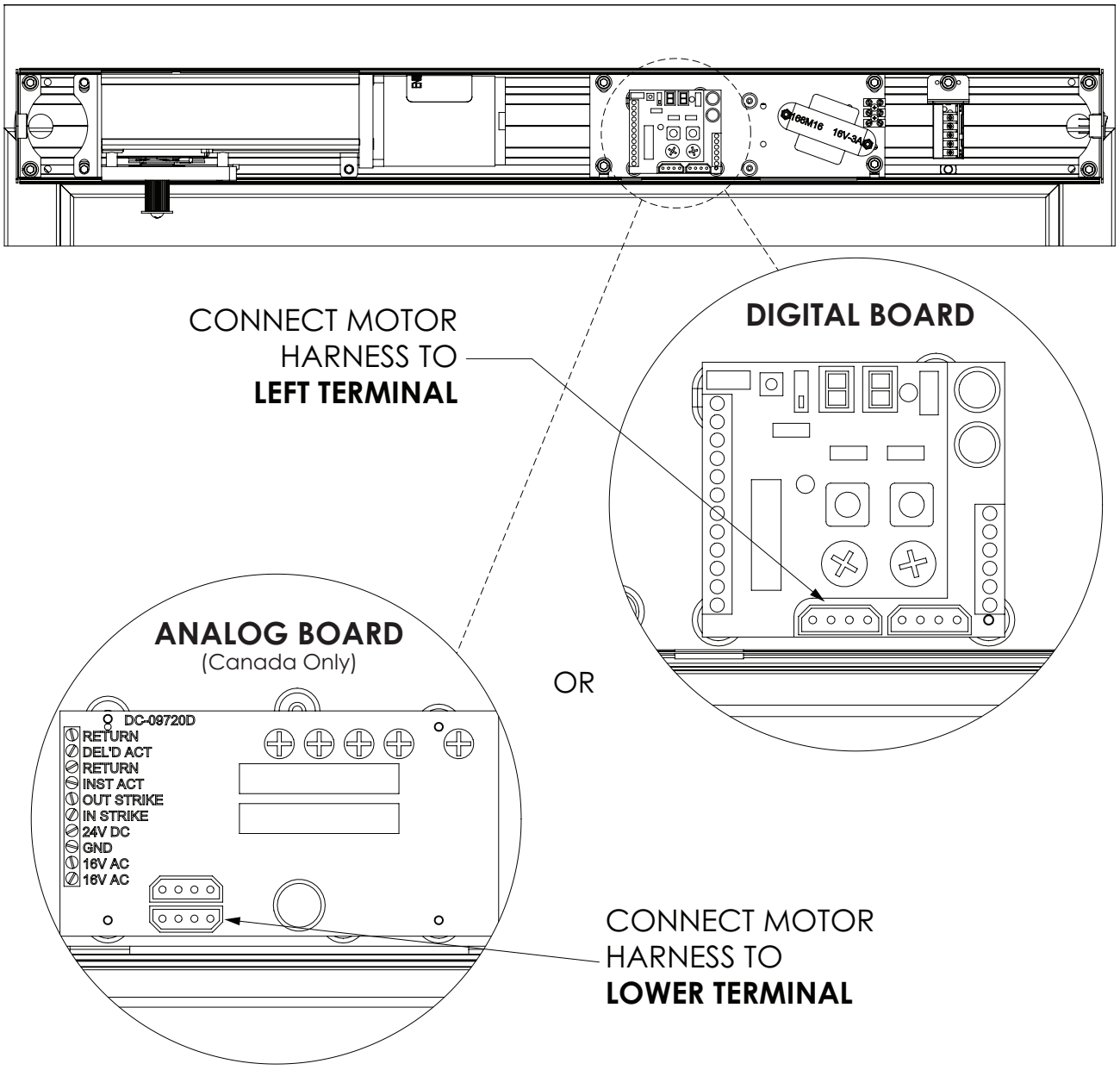


M8x18 SOCKET CAP SCREW
HOLDS GEARBOX TO HEADER.
TWO (2) **5/16" LOCK WASHERS**
MUST BE USED AS SHOWN.
(1, 2 & 3)

M8X1 HEX NUT ANCHORED ALL
COMPONENTS TO HEADER.

2.6 Motor Drive Installation

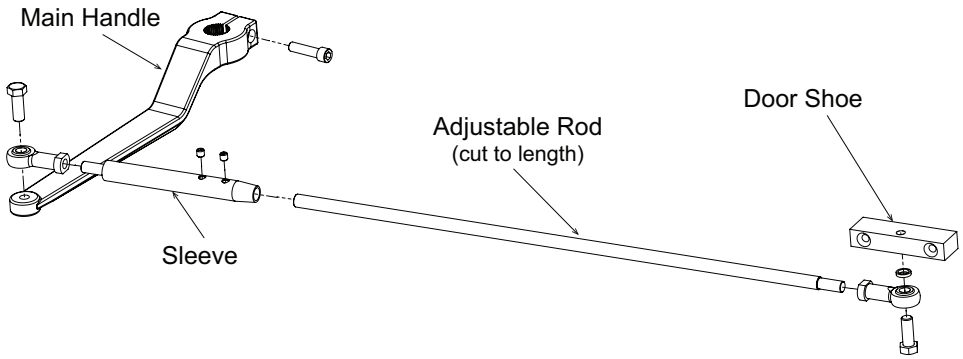
Connect the Motor wire leads (large four pin), the Back Check and Latch wire lead (small three pin) to the top of the board. For a Digital or Analog board, please connect the Motor harness to the appropriate terminal as below.



WARNING!
If the motor is not plugged into the circuit board there is no motor resistance against the spring when manually opening the door. The door or arm will close very quickly if opened, which could cause harm to pedestrians!

3.1 Arm Components & Configurations

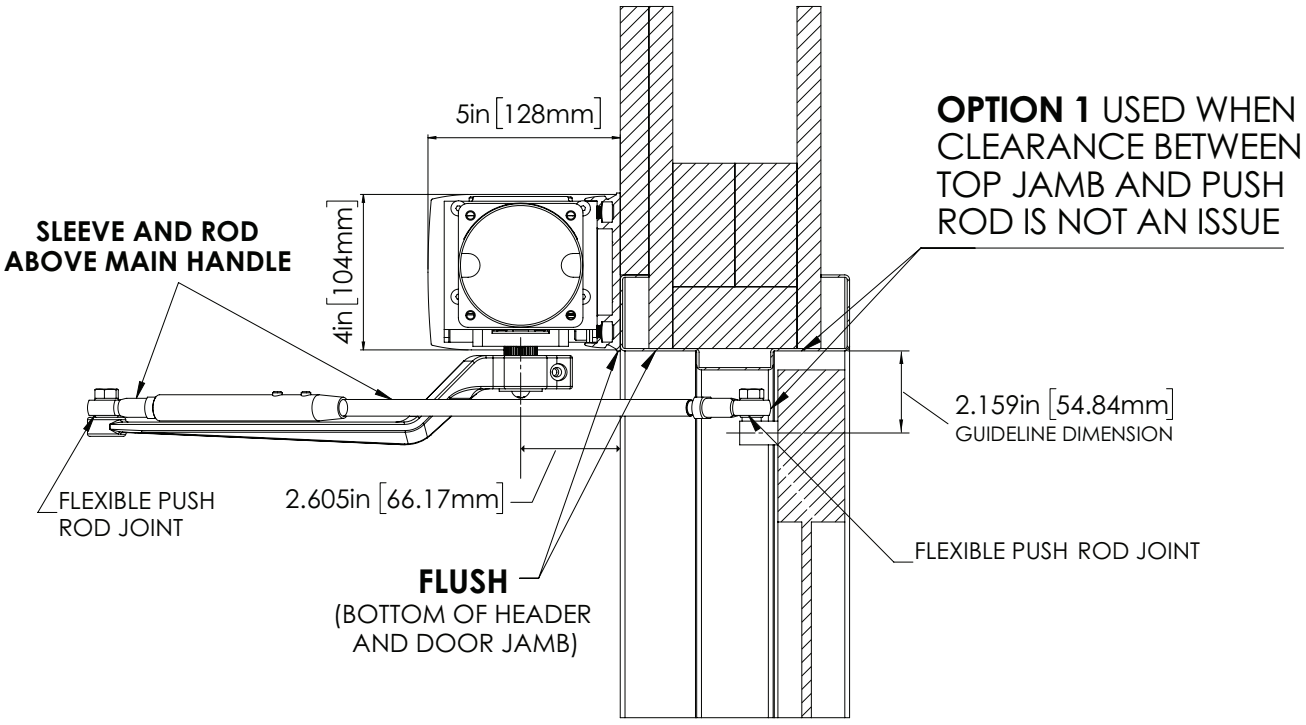
The main arm components will consist of the **Main Handle**, **Sleeve**, **Adjustable Rod** (cut to length), and **Door Shoe**, as shown below.



There are two (2) configurations available depends on situation and/or applications

Option 1- Standard Configuration

This is the standard configuration for the push arm, the Sleeve and Rod are above the Main Handle. Use this configuration when there is no issue with clearance between the Rod/Door Shoe and top jamb of the door frame. The Rod and Sleeve are flexible at the ends where they are bolted (semi-ball joint) which will provide additional flexibility during install.

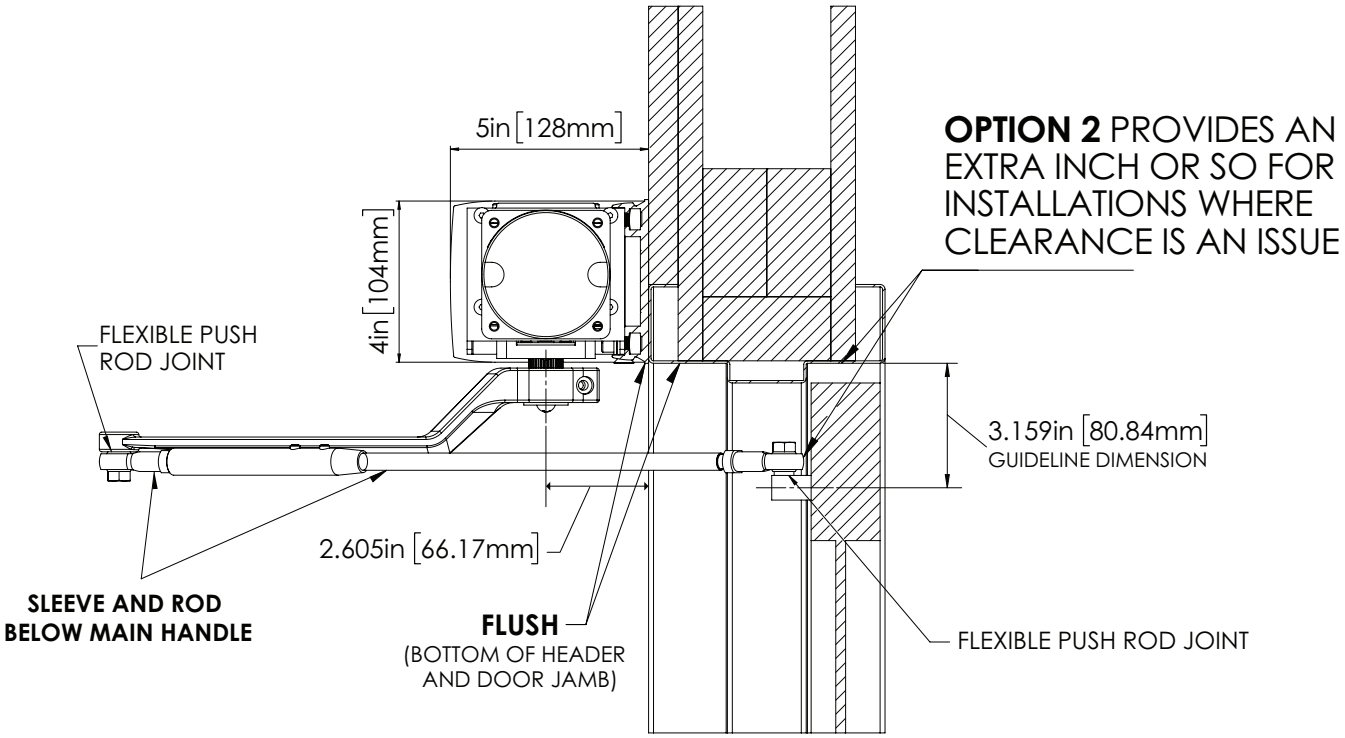


Option 2 - Alternate Configuration

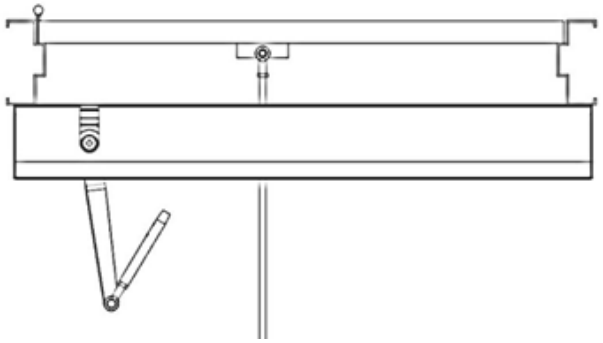
For this option, Sleeve and Rod are below the Main Handle. Use this configuration when the clearance between the Rod/ Door Shoe and the top jamb (or any other obstruction in the swing path) prevents **Option 1** from being properly installed. With this option, an approximate 1 inch in vertical space is gained. This configuration also uses on Double Egress Headers, where there is a pull arm and a push arm installed. The Rod and Sleeve are flexible at the ends where they are bolted (semi-ball joint) which will provide additional flexibility during install.

Note that the Rod is above the door shoe when installed, so that if the bolt ever loosens it will not fall down via gravity. Should the door rail you are attaching to have a thinner horizontal top rail, the door shoe can be reversed to be above the rod end if space permits.

Used when clearance is an issue, an extra inch or more is added for installation.



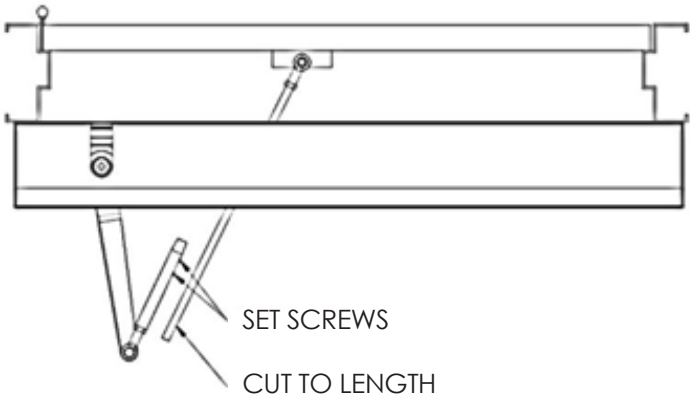
3.2 Push Arm Installation



STEP 1
Keep the door in close position,

Install Door Shoe 14 inches to first hole from hinge side and 2 ¼ inches from top of door.

Attached Rod to door block. Fit Main Handle and Sleeve on drive shaft (spindle) at 80 degrees to the door latch.



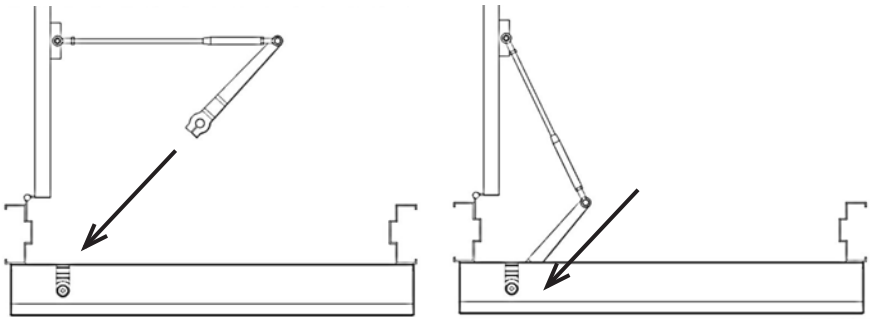
STEP 2
Line up Rod with Sleeve and mark 1 inch past 2nd set screw and cut

Remove Main Handle from drive shaft (spindle), and insert Rod fully into Sleeve. Tighten set screws.

STEP 3
Arm is now fully assembled and fixed to the Door Shoe on door panel.

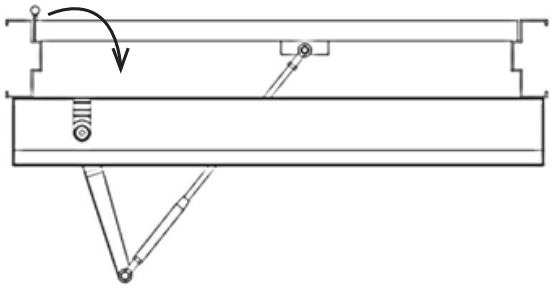
Set Operator Switch to Hold Open. Allow the drive shaft to turn the door fully until hitting the built-in door stop.

Assemble Main Handle to the drive shaft and tighten. If needed, loosen set screws for minor adjustment of door position.

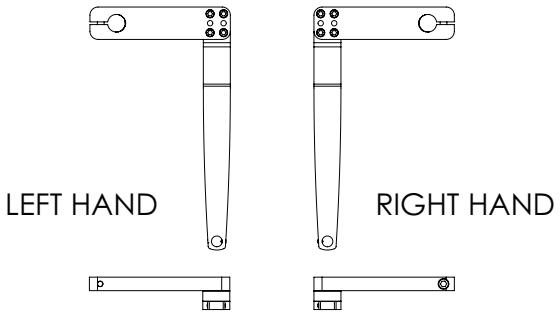


For 2 position toggle switch and/or Analog Board, jumper Instant Activation and Return to set door to Hold Open. Remove jumper to close door.

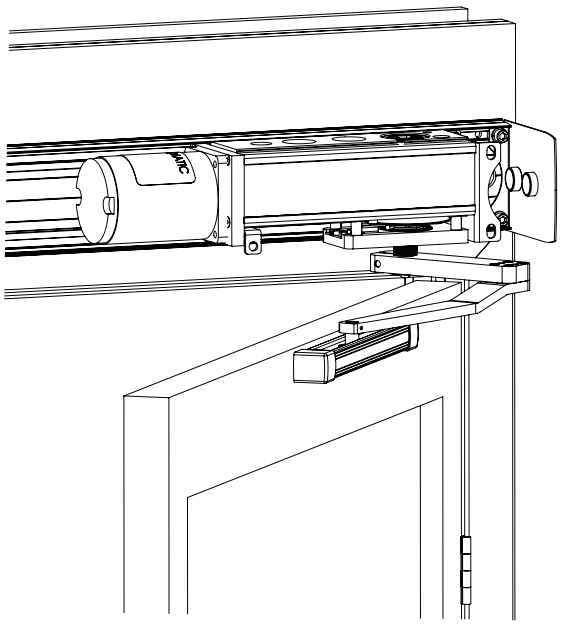
STEP 4
Set Operator Switch to Automatic and allow door to close under spring pressure. Test and adjust if necessary.



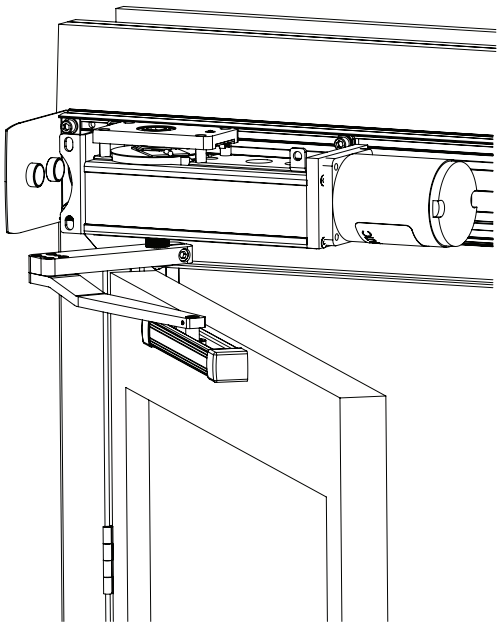
3.3 Pull Arm (Z-arm) Installation



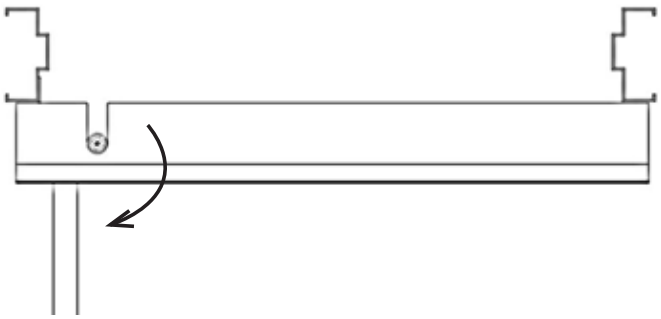
LEFT HAND PULL



RIGHT HAND PULL



STEP 1
Set Operator Switch to Hold Open (II). The drive shaft (spindle) will turn until hitting the internal doorstop.

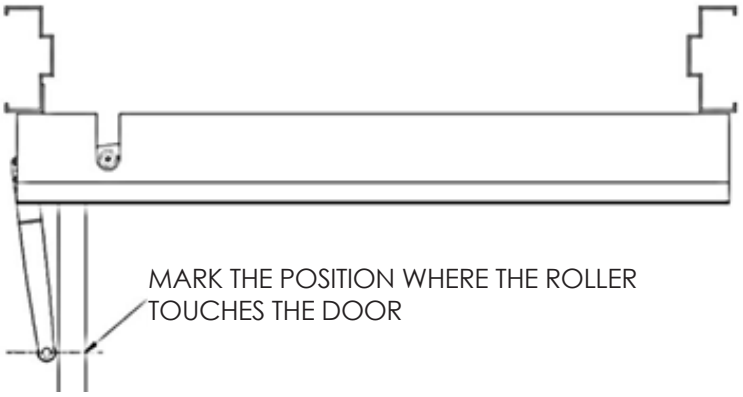


For 2 position toggle switch and/or Analog Board, jumper Instant Activation and Return to set door to Hold Open. Remove jumper to close door.

STEP 2

Keep the door in full open position

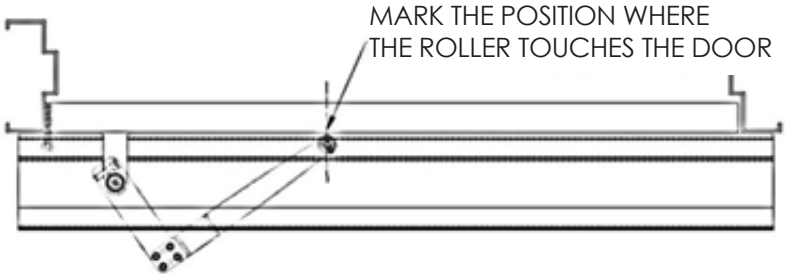
Fit Z-Arm to the drive shaft (spindle) at the full open position and tighten. Mark open position where roller touches door.



STEP 3

Set Operator Switch to OFF (0) and allow door to close under spring pressure.

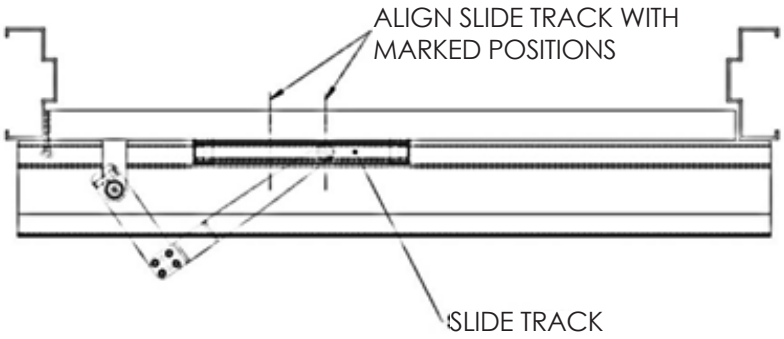
In closed position, place mark where roller touches door



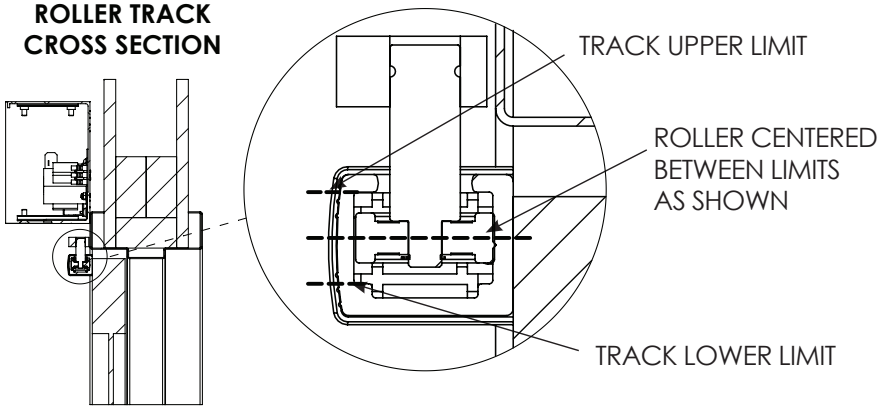
STEP 4

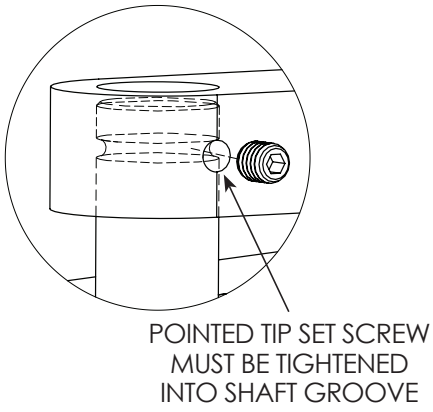
Fit slide track in line with 1st and 2nd mark and fix to the door. Turn three-position switch to Automatic (I).

Test and adjust if necessary.



ROLLER TRACK CROSS SECTION

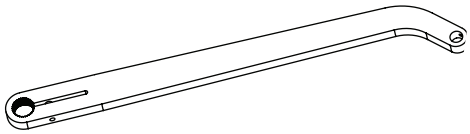




Make sure Pull Track is installed level with the header. This is to ensure the roller stays inside the track during opening and closing, prolonging the life of the roller.

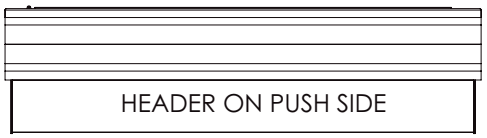
3.4 Universal Arm

Universal Arm can be used as both Push and Pull arm, allowing flexibility to mount the HA-8 on either side of the door opening.



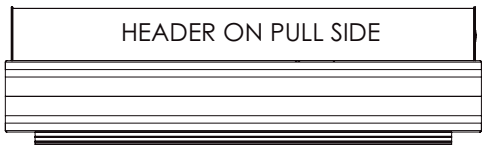
PUSH APPLICATION

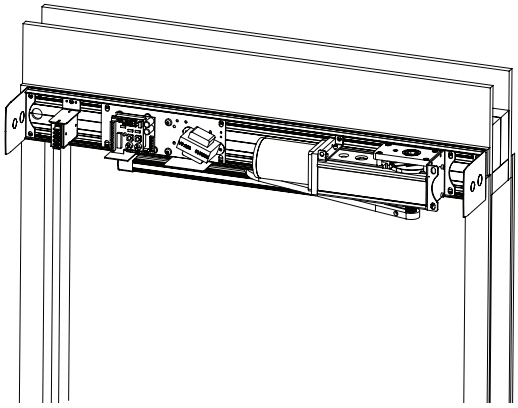
DOOR 'PUSHED' OUT

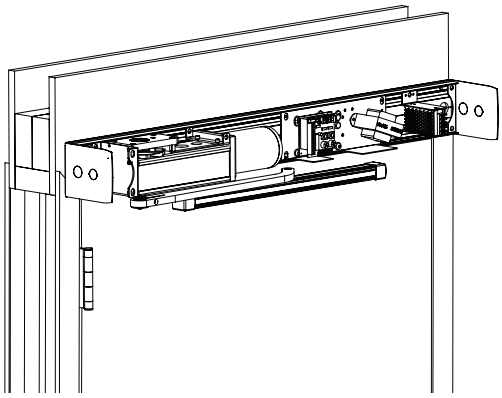


PULL APPLICATION

DOOR 'PULLED' OUT

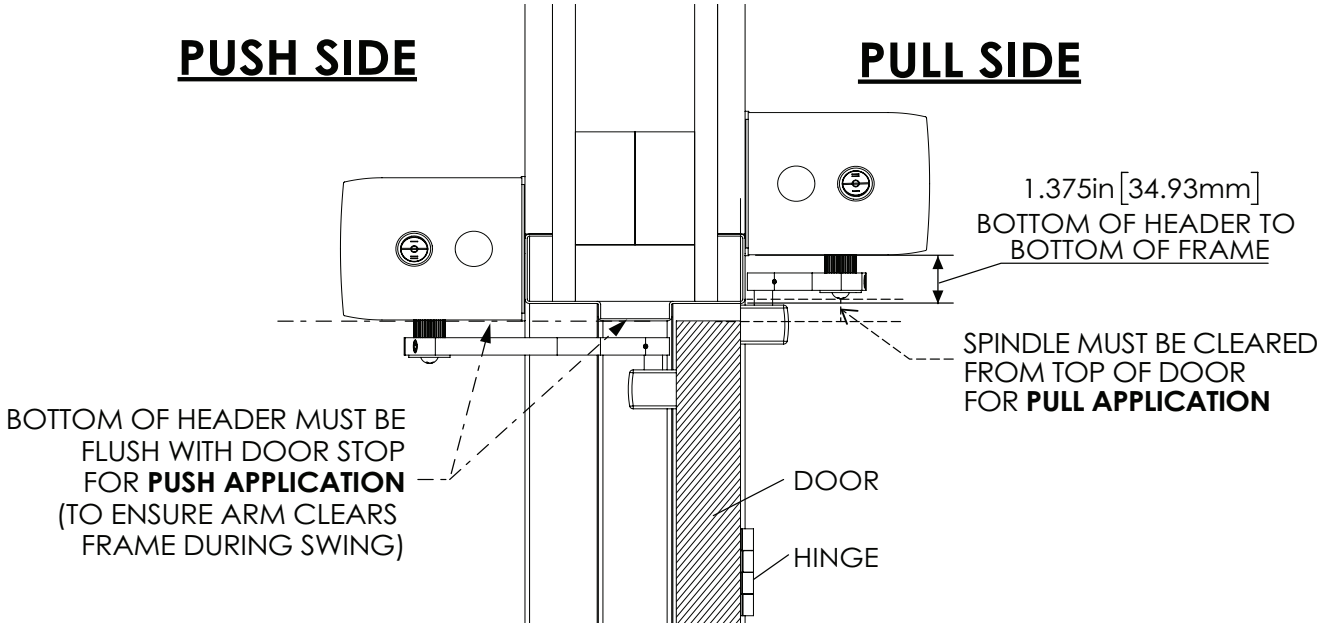






PUSH SIDE

PULL SIDE

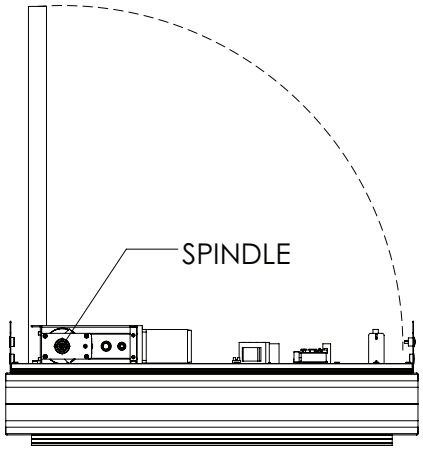


Universal Arm as Pull Application

STEP 1 - Fully Open

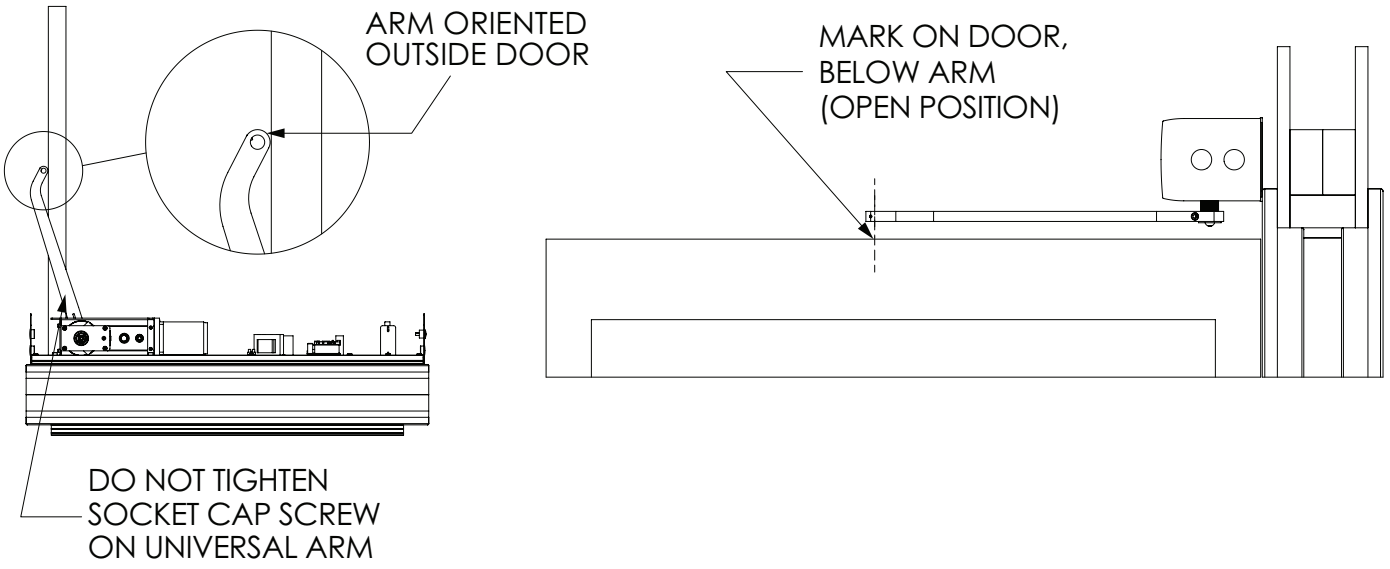
- Open the door to full open and set switch to Hold Open (II).
- The drive shaft (spindle) will turn fully until hitting the internal doorstop.

For 2 position toggle switch and/or Analog Board, jumper Instant Activation and Return to set door to Hold Open. Remove jumper to close door.



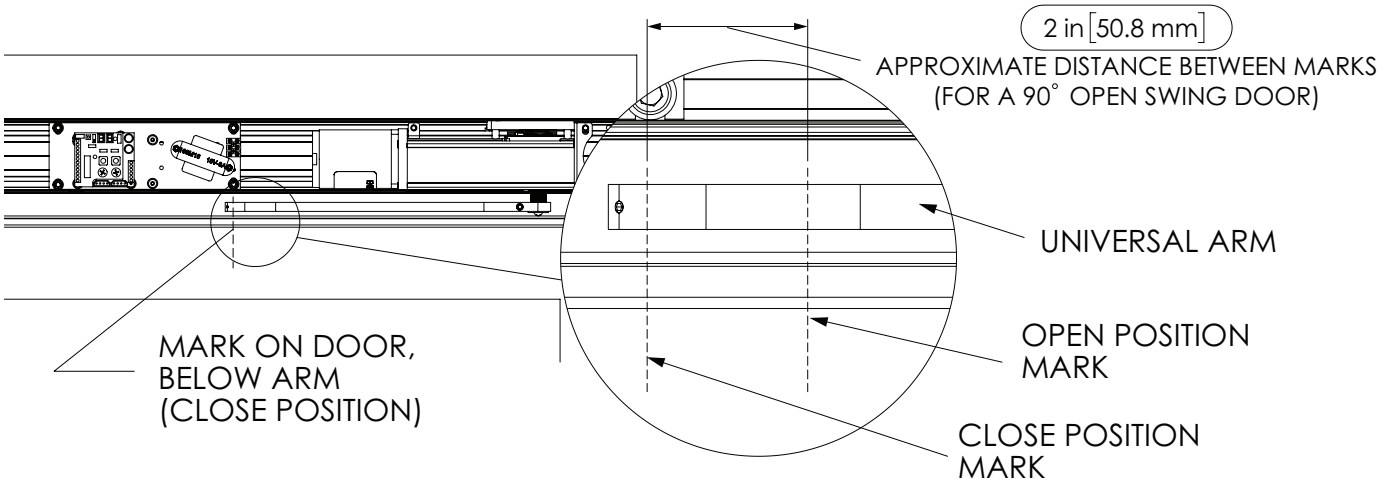
STEP 2 - Universal Arm at Fully Open

- Fit the universal arm to the drive shaft (spindle) at full open position, but do not tighten the ¼”-20 x 7/8” socket cap screw all the way. This is to allow the arm some freedom/flexibility. The universal arm must be positioned such that it is just in front of the door as shown.
- Mark the spot where the roller would touch the door (directly below where the arm meets the door in open position.



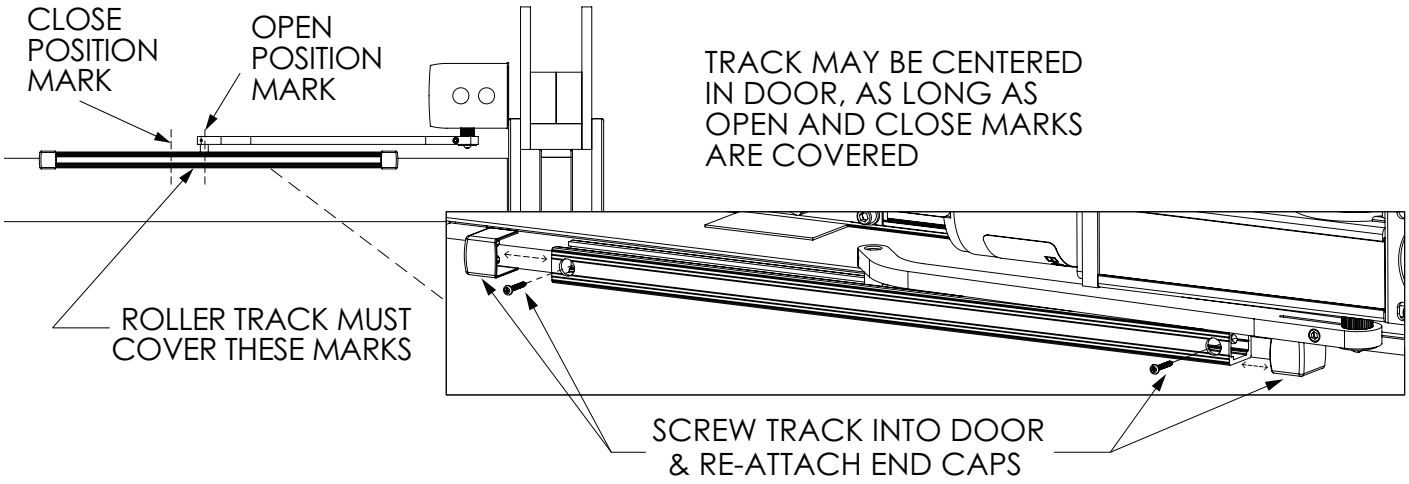
STEP 3 - Universal Arm at Fully Close

- Close the door fully. Then do the same with the operator by setting the switch to off and allow the spindle to unwind under spring pressure.
- In this closed position, mark the spot where roller would touch door (directly below where the arm meets the door).



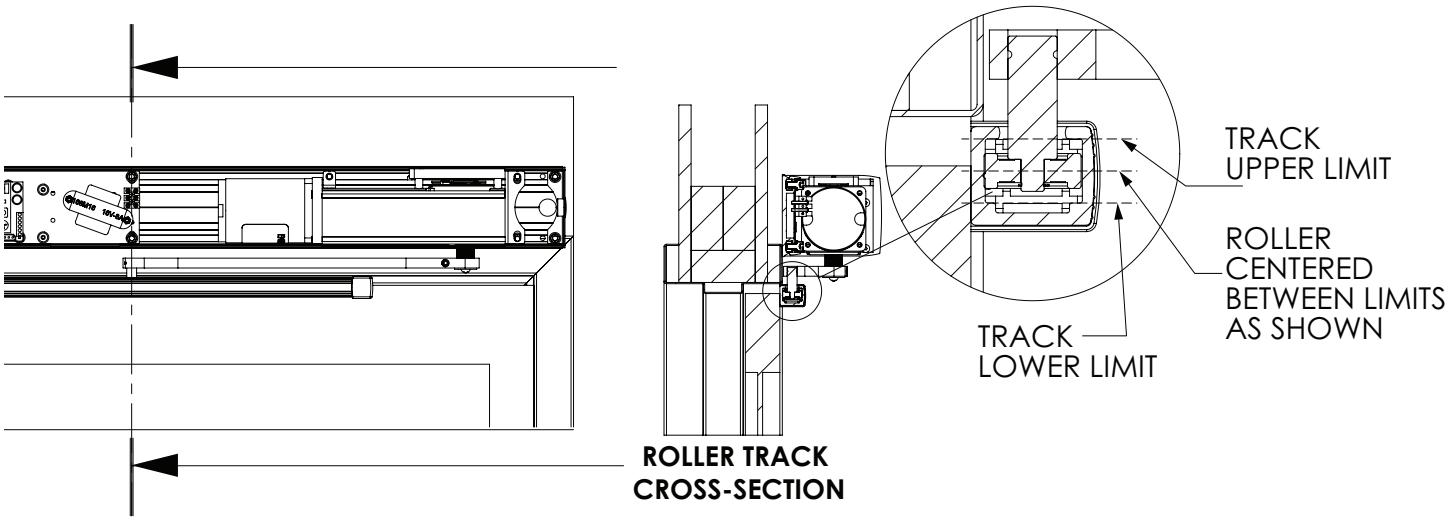
STEP 4 - Fitting Pull Track

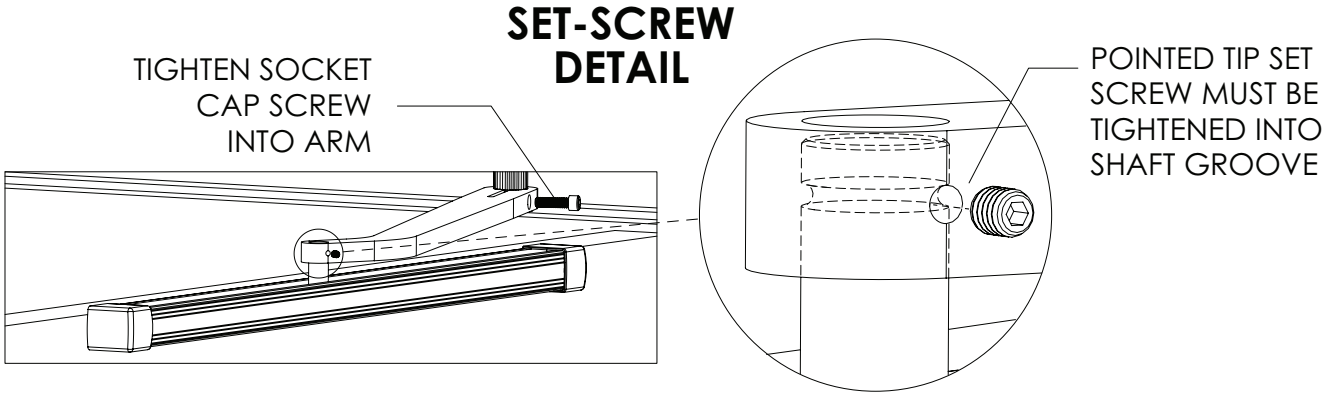
- These two marks (open and close) illustrate the travel of the roller during the door swing, and thus must be within the universal track after mounting. For a pull (with door opening 90 degrees), these two marks should not be more than a couple inches apart. For door openings larger than 90 degrees, this distance will increase.
- Remove the two ends caps and fit the extended pull track to cover the 1st and 2nd mark.
- Fix to the door, using the #14-10x1" Phillips/Square Pan Self-Tapping Screws provided in the screw pack (or the fastener of your choice). You may center the roller track in the door for visual aesthetics if the door width allows, but ensure the track covers the open and close marks for correct operation.
- Re-attach the two end caps to hide the screws.



STEP 5 - Attaching Universal Arm

- Attach the roller shaft to the arm as shown, making sure the set screw is tightened into the groove on the roller shaft. This will ensure that the arm and shaft do not dislocate during operation. For optimal performance, the roller should be in-between the track limits as indicated.
- Tighten the ¼”-20x7/8” socket cap screw for the male and female splines to grip correctly.
- Turn switch to Automatic or ON.
- Test and adjust if necessary.





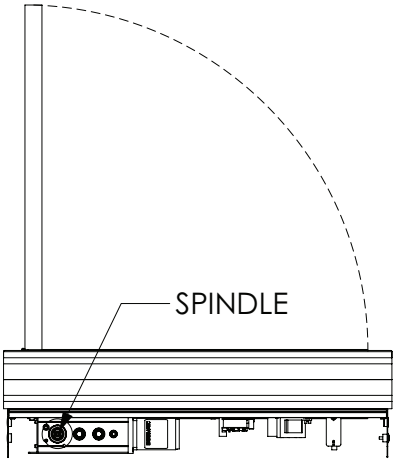
Make sure Pull Track is installed level with the header. This is to ensure the roller stays inside the track during opening and closing, prolonging the life of the roller.

Universal Arm as Push application

For installing Universal arm as Push application, what is critical is that the bottom of the header be mounted in line with the bottom of the top jamb door stop. This is to ensure that the arm has enough clearance when swinging through the upper jambs.

STEP 1 - Fully Open

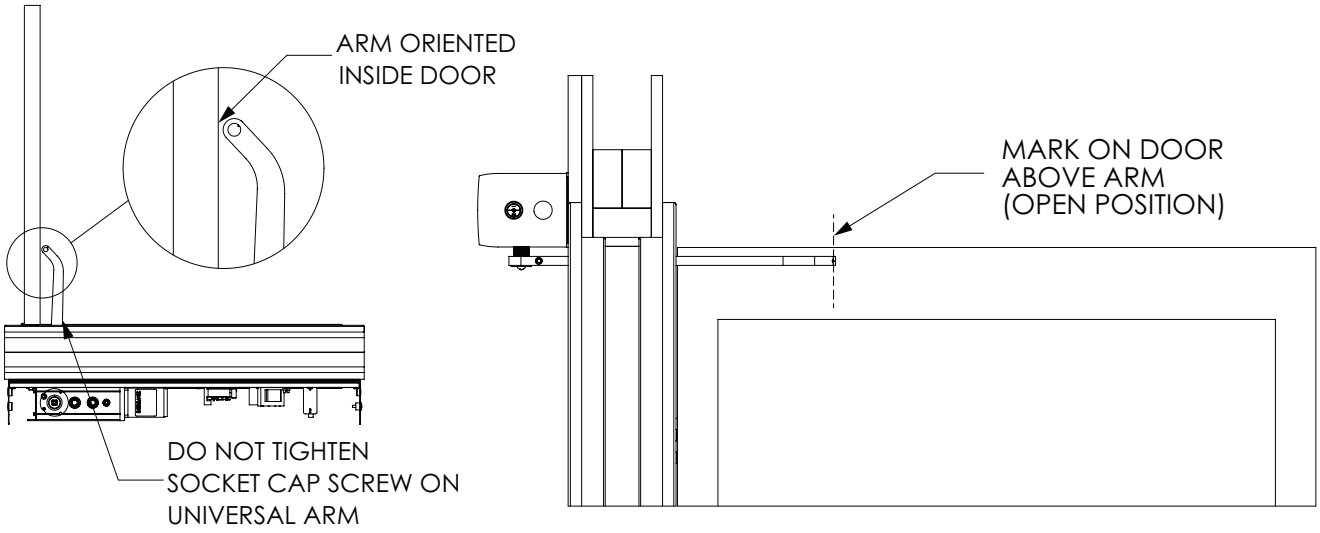
- Open the door to full open and set switch to Hold Open (II).
- The drive shaft (spindle) will turn fully until hitting the internal doorstop.



For 2 position toggle switch and/or Analog Board, jumper Instant Activation and Return to set door to Hold Open. Remove jumper to close door.

STEP 2 - Universal Arm at Fully Open

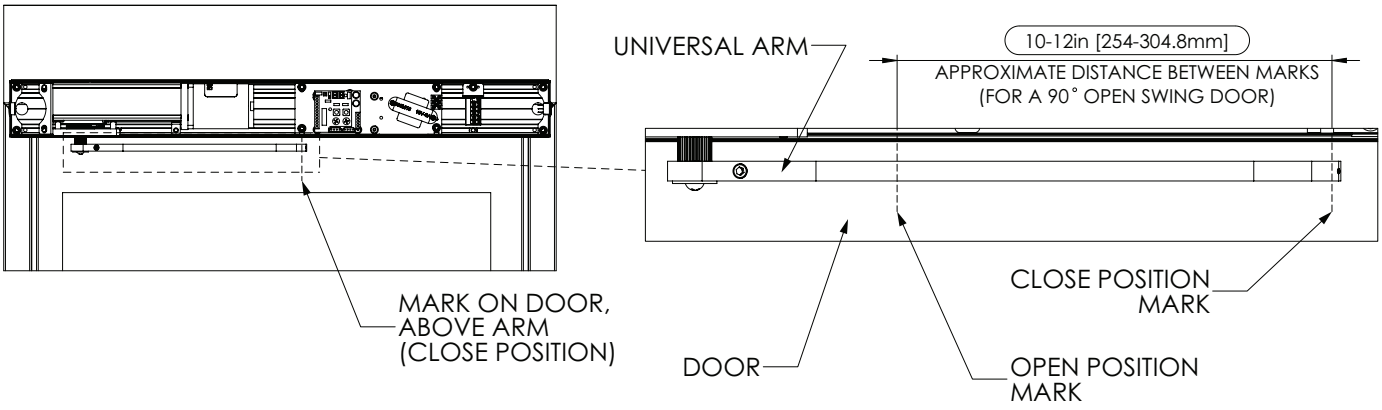
- Fit the universal arm to the drive shaft (spindle) at the full open position, but do not tighten the ¼”-20x7/8” socket cap screw all the way This is to allow the arm some freedom/flexibility.
- Mark the spot where the roller would touch the door (directly below where the arm meets the door in open position).



For 2 position toggle switch and/or Analog Board, jumper Instant Activation and Return to set door to Hold Open. Remove jumper to close door.

STEP 3 - Universal Arm at Fully Close

- Close the door fully. Then do the same with the operator by setting to OFF and allow the spindle to unwind under spring pressure
- In closing position, mark the spot where roller would touch door (directly below where the arm meets the door).

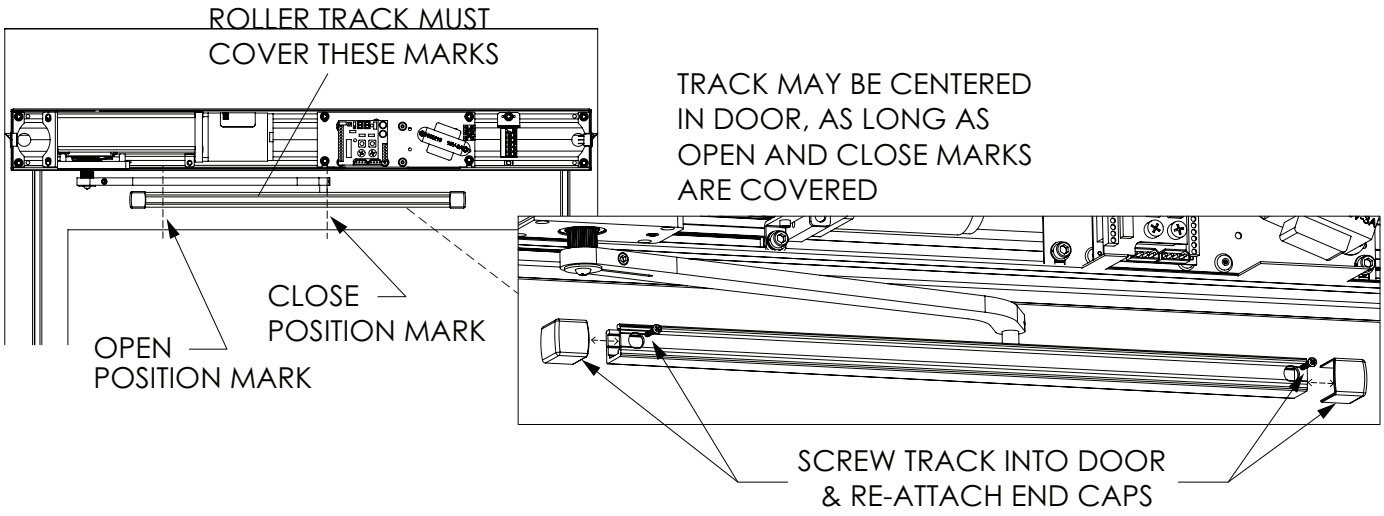


STEP 4 - Fitting Pull Track

- These two marks (open and close) illustrate the travel of the roller during the door swing, and thus must be within the universal track after mounting. For a push (with door opening 90 degrees), these two marks will be around 10-12 inches apart.

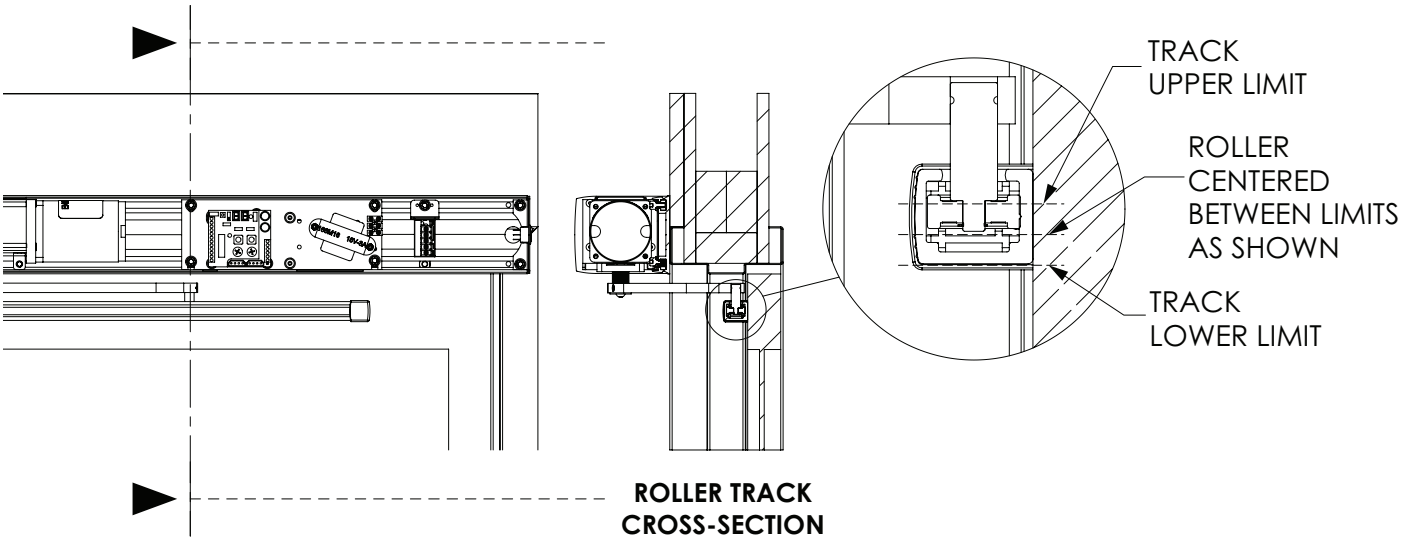
  Remove two ends caps and fit the extended pull track to cover the 1st and 2nd mark.
- Fix to the door, using the #14-10x1" Phillips/Square Pan Self-Tapping Screws provided in the screw pack (or the fastener of your choice). You may center the roller track in the door for visual aesthetics if the door width allows, but ensure the track covers the open and close marks for correct operation.
- Re-attach the two end caps to hide the screws.

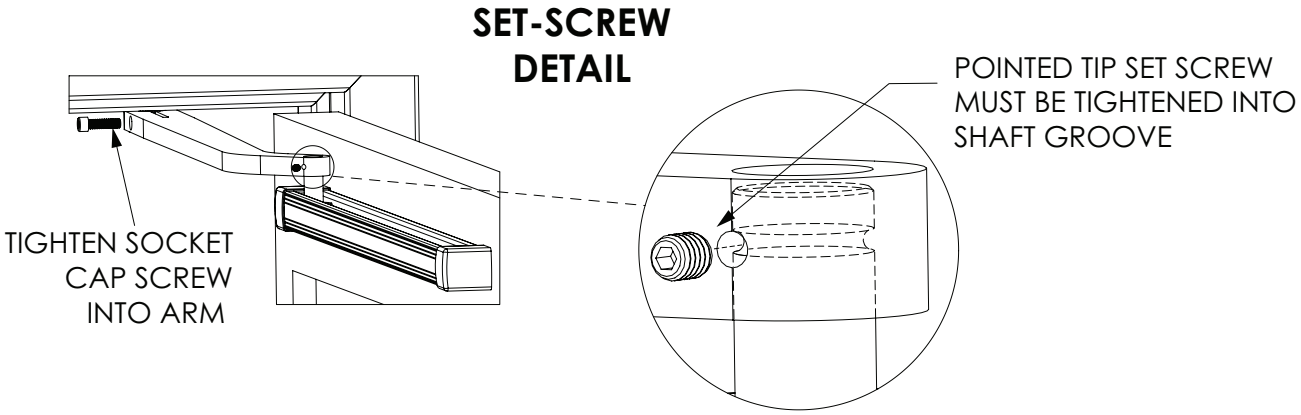
Note that for door openings larger than 90 degrees, the universal arm MUST be used as Pull application.



STEP 5 - Attaching Universal Arm

- Attach the roller shaft to the arm as shown, making sure the set screw is tightened into the groove on the roller shaft. This will ensure that the arm and shaft do not dislocate during operation.
- Tighten the ¼”-20x7/8” socket cap screw for the male and female splines to grip correctly.
- Turn switch to automatic or on.
- Test and adjust if necessary.





Make sure Pull Track is installed level with the header. This is to ensure the roller stays inside the track during opening and closing, prolonging the life of the roller.

4.1 Back Check and Latch Adjustment

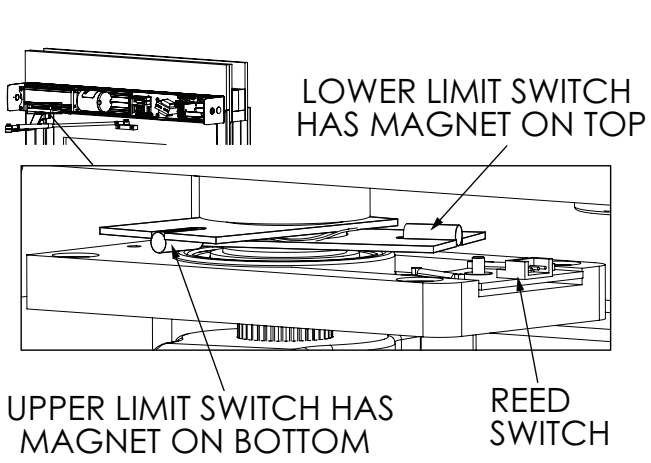
Setting Latch and Back Check position can be achieved using a small flat head screwdriver:

1. Set latch check Upper Magnet over the reed switch at full CLOSED.
2. Open door to full OPEN (90 degrees).
3. Set Back Check Lower Magnet, while holding Latch magnet in place.

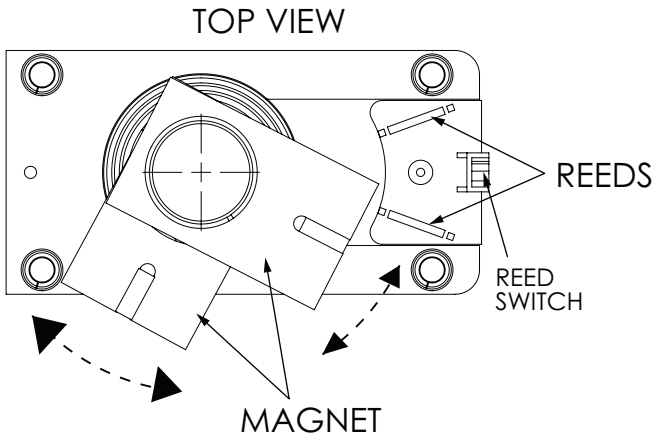
Latch and Back Check Proximity Switches are clearly indicated as shown by the sticker attached to the motor gearbox below.

Latch Position
With door at closed position, set Proximity Magnet to activate LATCH. This will begin Closing Low Speed or Latch for 10 degrees of travel, prior to door reaching full closed position.

Back Check Position
With door at full open position, set Proximity Magnet to activate BACK CHECK. This will begin Open Low Speed or Back Check for 10 degrees of travel, prior to door reaching full open position.



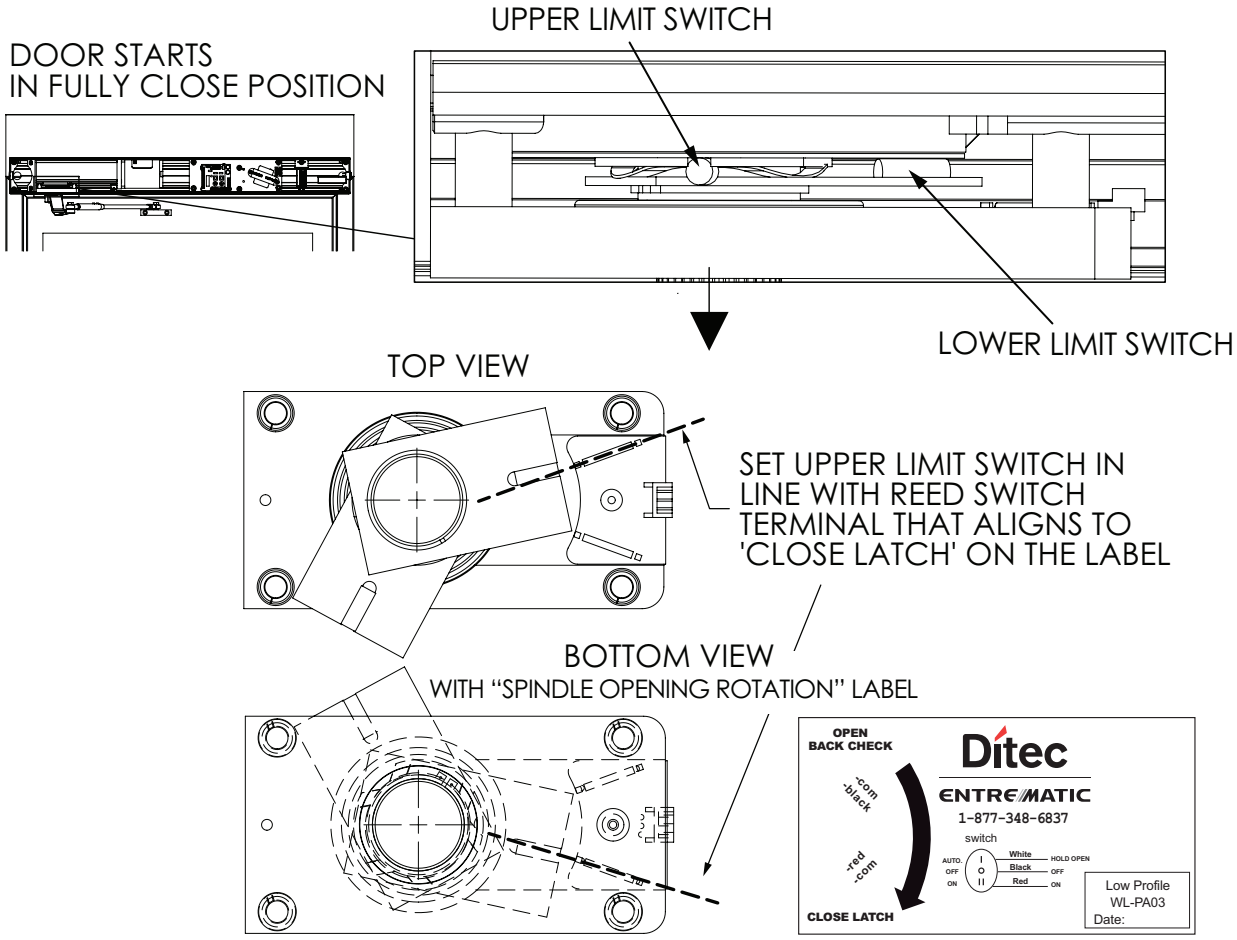
FACTORY SET POSITION:



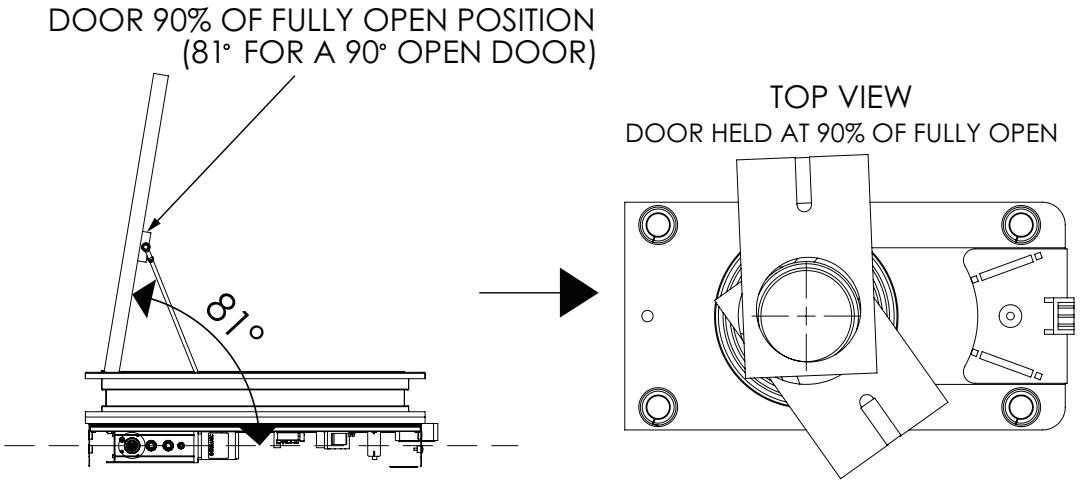
At Latch and Back Check – Door should slow for the final 10 degrees of open or close movement. Back Check and Latch speed adjustment may be necessary via control panel. (LED 1/2 – 0~5 in 6 steps)

WARNING!
Proximity Switch MUST engage at open or close, otherwise door will not operate correctly and power fuse may be blown (overload).

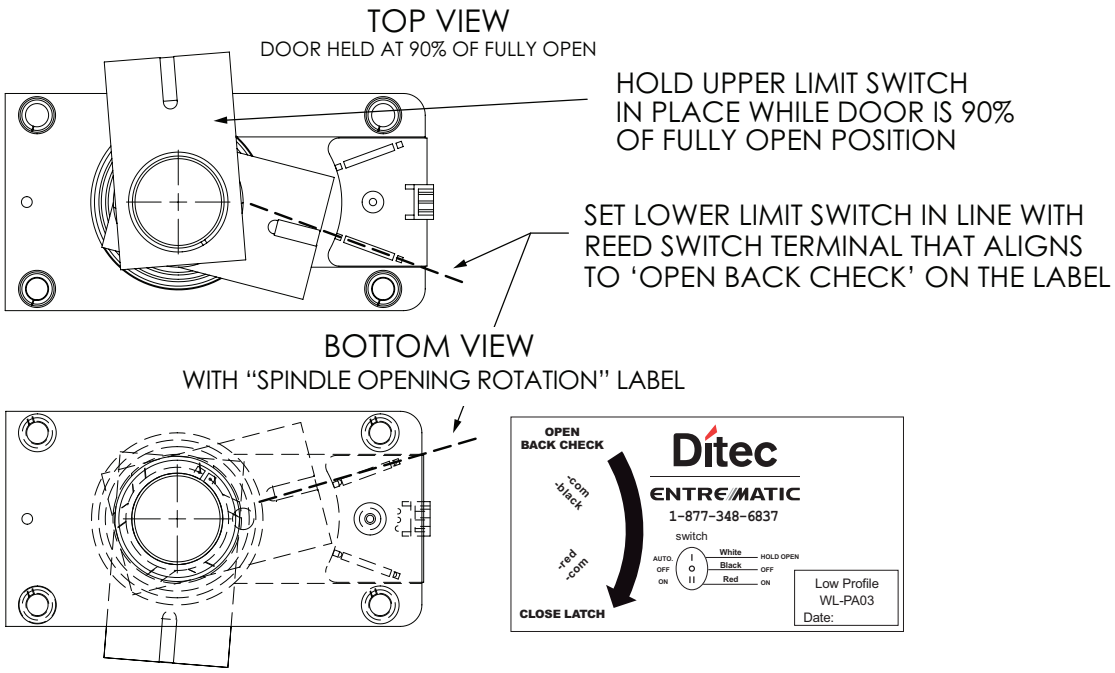
STEP 1: SETTING LATCH CHECK



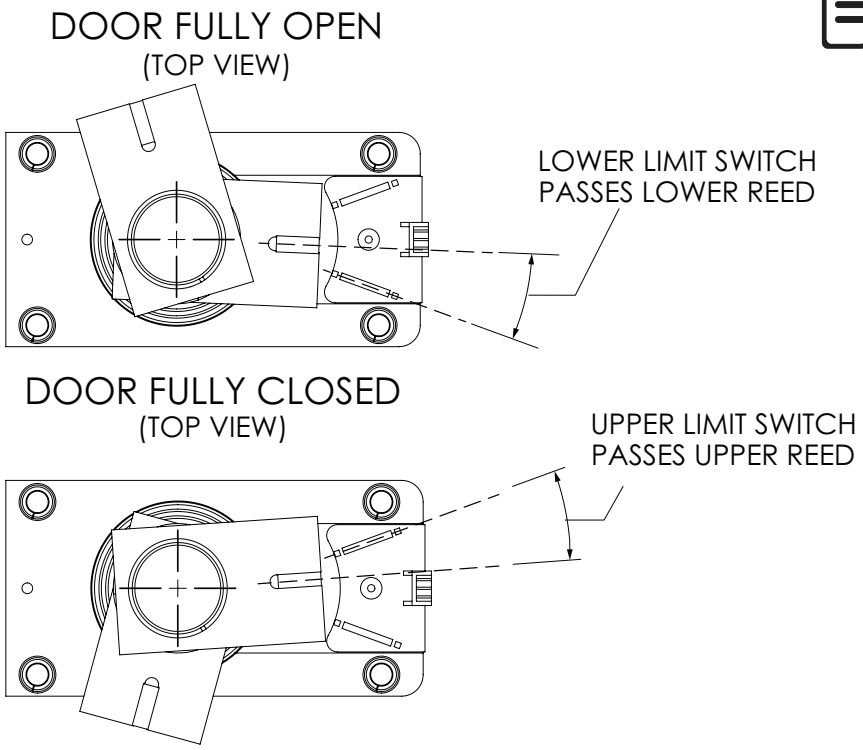
STEP 2: OPEN DOOR TO BEFORE BACK CHECK



STEP 3: SETTING BACK CHECK



FINAL POSITIONS



These switch positions will vary depending on your install and/or site conditions. Door openings smaller or larger than 90 degrees will also have different positions for each switch.

IMPORTANT: Back Check and Latch Check occurs at 10 degrees before fully open and fully close position, respectively.

4.2 Spring Tension Adjustment

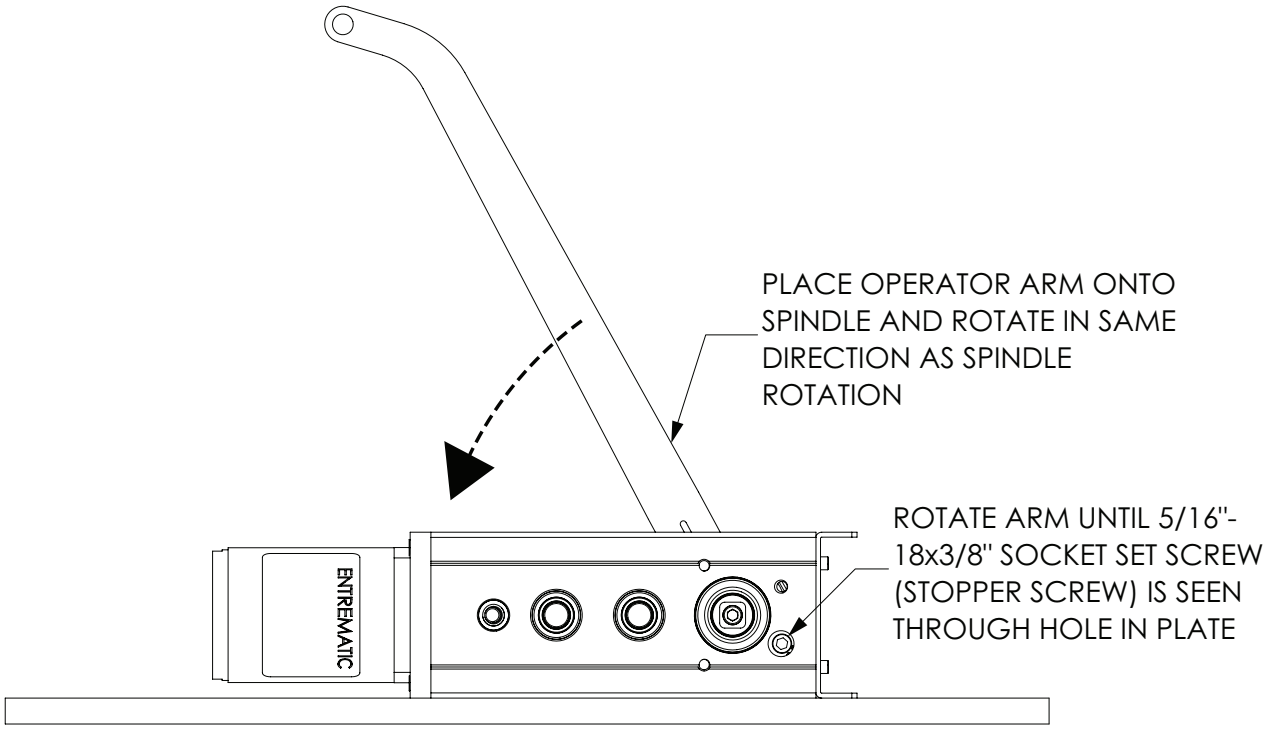
You can increase or decrease the spring tension for windy conditions to provide increased latch pressure. This is accomplished by using the arm to move the stop one to two set holes in main gear.

To begin,

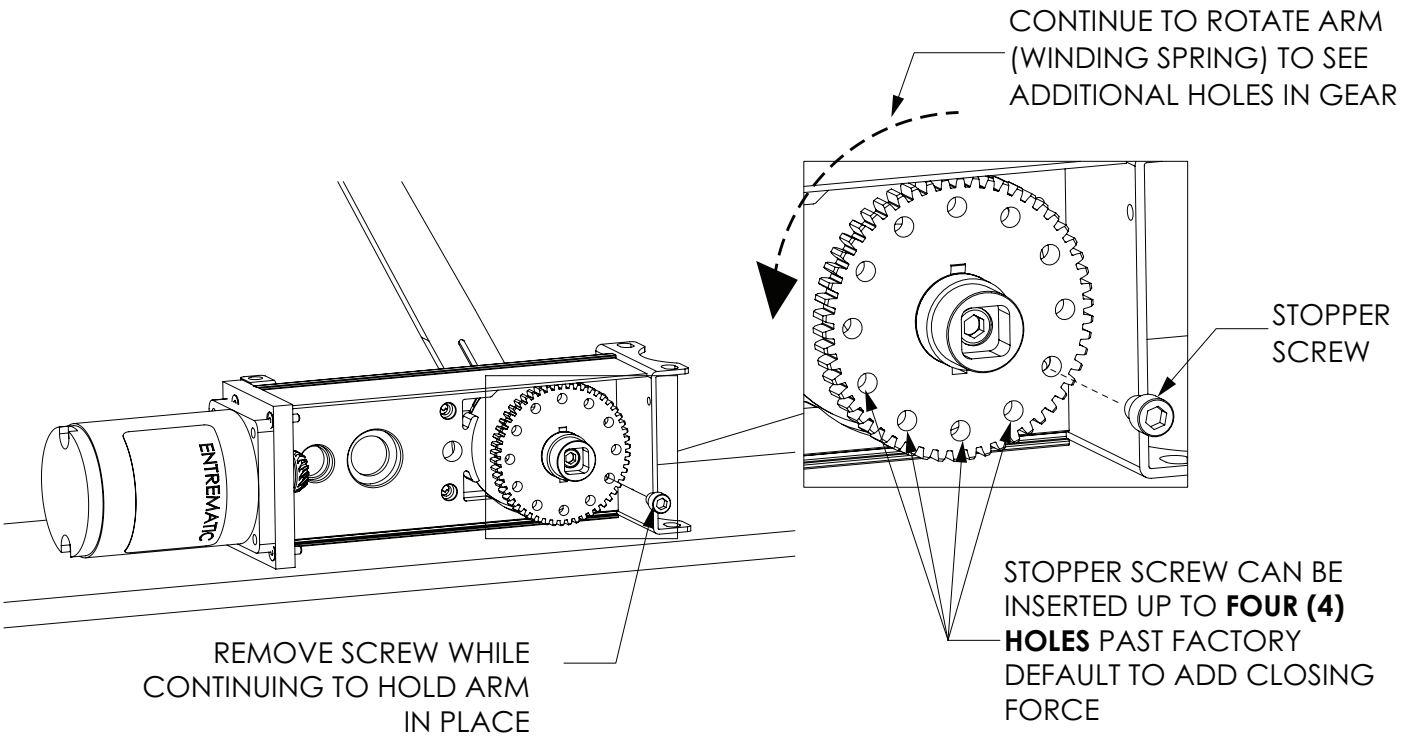
- Remove the operator from the header.
- Remove the fender washer and machine screw at the end of the spindle.
- Detach the operator arm and remove the operator as described in section 2.5.
- Place the operator on a secure flat surface on its side.

STEPS

1. The door stop can be removed from an access point in the gearbox housing, as shown in drawing.
2. Once the set hole has been established, the door stop can be replaced in the gearbox housing and tightened in place.
3. Additionally, re-adjustment must also be made to settings of magnets for the BACK or LATCH CHECK.



To Increase spring tension, rotate arm in the direction of spindle rotation.
To Decrease spring tension, allow arm to unwind opposite to spindle rotation.



- **The drive unit must be removed from the header to make this adjustment and this will also change the manual opening and closing force (Check your local codes).**
- **It is NOT recommended to go past four (4) holes (a third turn of the arm, from factory default) for adding closing force.**
- **Once spring tension has been adjusted to a suitable level, please note that the Back and Latch Check will need to be readjusted through the same process in Section 4.1.**

5.0 TESTING WITH OBSTRUCTION

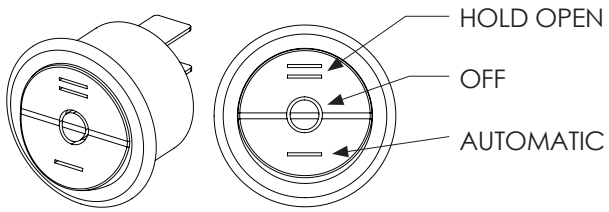
For Optimum performance, door will open and push against obstruction for 2 sec then close.
Adjust Overload according to door weight, size and site condition.

- For heavier doors – overload can be increased against weight resistance
- For lighter doors – avoid over setting of overload
- For external factors (door condition, wind, stack pressure) – Adjust overload according to each site condition.

6.1 Basic Operation

Basic Operation

- When the door receives activation, the door opens and brakes before the fully open position and opens slowly to the full doorstop position, following the programmed data.
- Once pre-set open period is complete, the door will close at the pre-set closing speed, braking to low speed a little before the fully closed position and closes slowly.
- When an activation signal activates while the door is closing, the door will stop and reverse to open.



6.2 Operation Switch

The Operation Switch must be set to Automatic (I) positions to allow changes to be made in programming.

Operation Switch

- Operation (3 position) Switch is located on the end plate.
- With the door in the closed position. Check that the door is unlocked and the main power switch is on. (A main power isolator switch should be positioned to the side of the header.
- Check the status of the Operation switch:

Automatic Mode (I)

- This mode sets to activate the operator
- Activate the push button or knowing act device. The door opens to about 80 degree position at full speed, and then will slow for the final 10 degree of opening until full open is complete. (There is no need for a learning cycle as the open position is already pre-set during installation).
- After the pre-set open time is complete, the door will begin to close at the set closing speed, until the final 10 degree of closing, when the door will slow for the final 10 degree of closing until the full latch position.

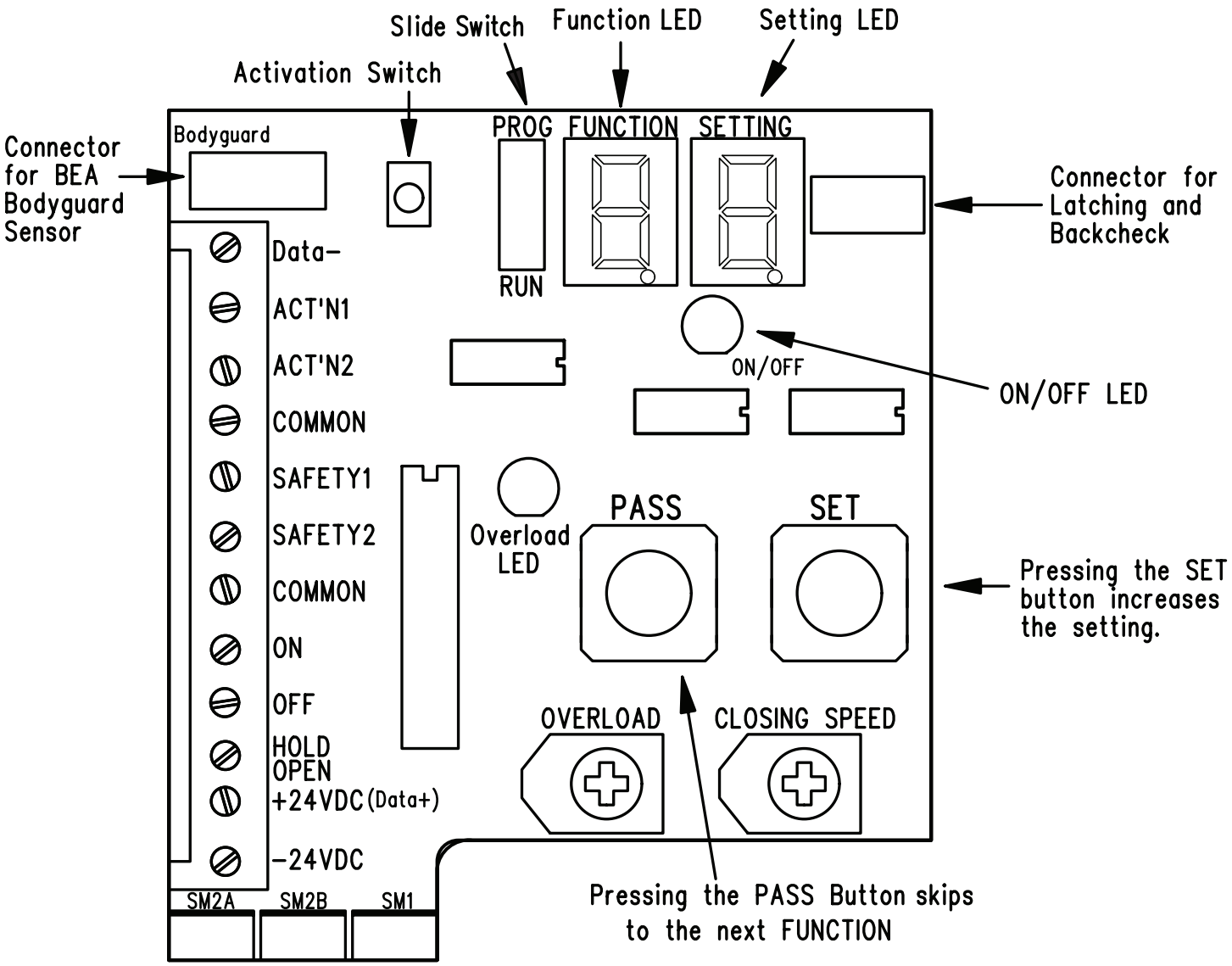
Hold Open Mode (II)

- This mode sets to hold the door open automatically for an extended length of time.
- No activation or safety sensor signals will be active in this mode as the door is stationary in the open position. The door will remain held open continually by a pulsed signal to the motor without overheating.
- To close the door, move the switch to either Automatic (I) or OFF (0) position, and the door will close smoothly and gently to the full closed position.

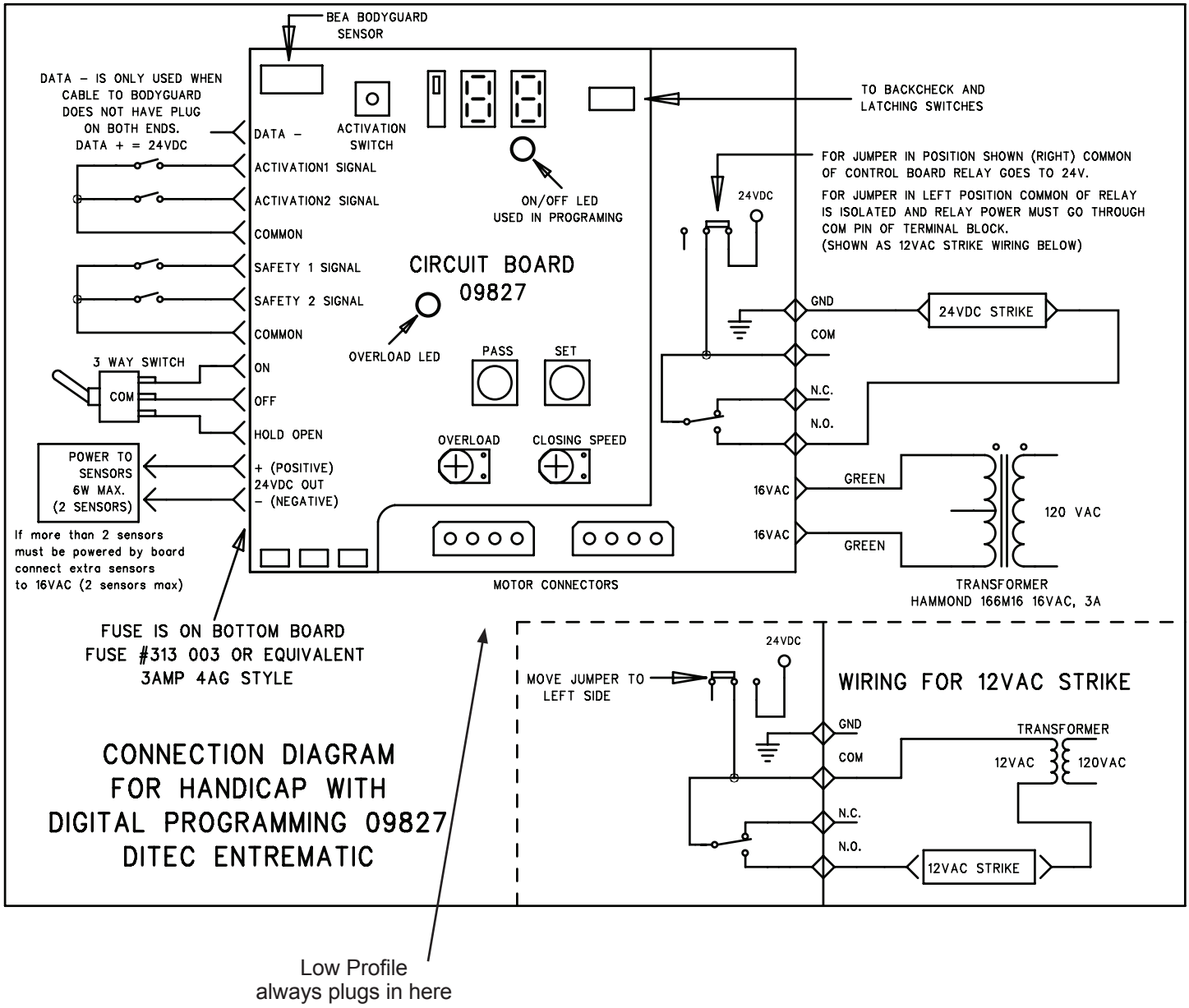
OFF (Manual) Mode (O)

- This mode sets to deactivate all opening signals, and the door is opening and closing manually.
- No activation signals or safety sensor signals (if equipped) will be active in this mode as the door is stationary in the closed position.
- Power will remain ON and supplied to the unit, however all signals will be ignored. The door can be opened easily with minimum force.

7.1 Digital Board Diagram



7.2 Digital Board Wiring



A Switch or Jumper must be wired from the ON terminal to the OFF terminal for Programming to work! This is only needed if there is no switch on the board.

7.3 Digital Board Specification

INPUTS

AC VOLTAGE

LINE VOLTAGE		TRANSFORMER (Hammond)
120VAC 60Hz	Low Energy	#166N24 – 24VAC – 4AMP
		#166M16 – 16VAC – 3AMP
240VAC 50Hz	Low Energy	#266N24 – 24VAC – 4AMP
		#266M16 - 16VAC – 3AMP

ACTIVATION 1 (ACT'N1)
- First input to open the door. Instant Activation (i.e. push buttons)
- ON = Closed contact to ground/common.
- See Function A", Setting A1" for description of alternate operation

ACTIVATION 2 (ACT'N2)
- Second input to open the door. Delayed activation.
- ON = Closed contact to ground/common.
- See Function A", Setting A1" for description of alternate operation.

SAFETY 1
- For Safety1 ON door will not open if presently fully closed and door will not close if presently fully opened
- ON = Closed contact to ground/common. (i.e. overhead presence sensors [bodyguard])

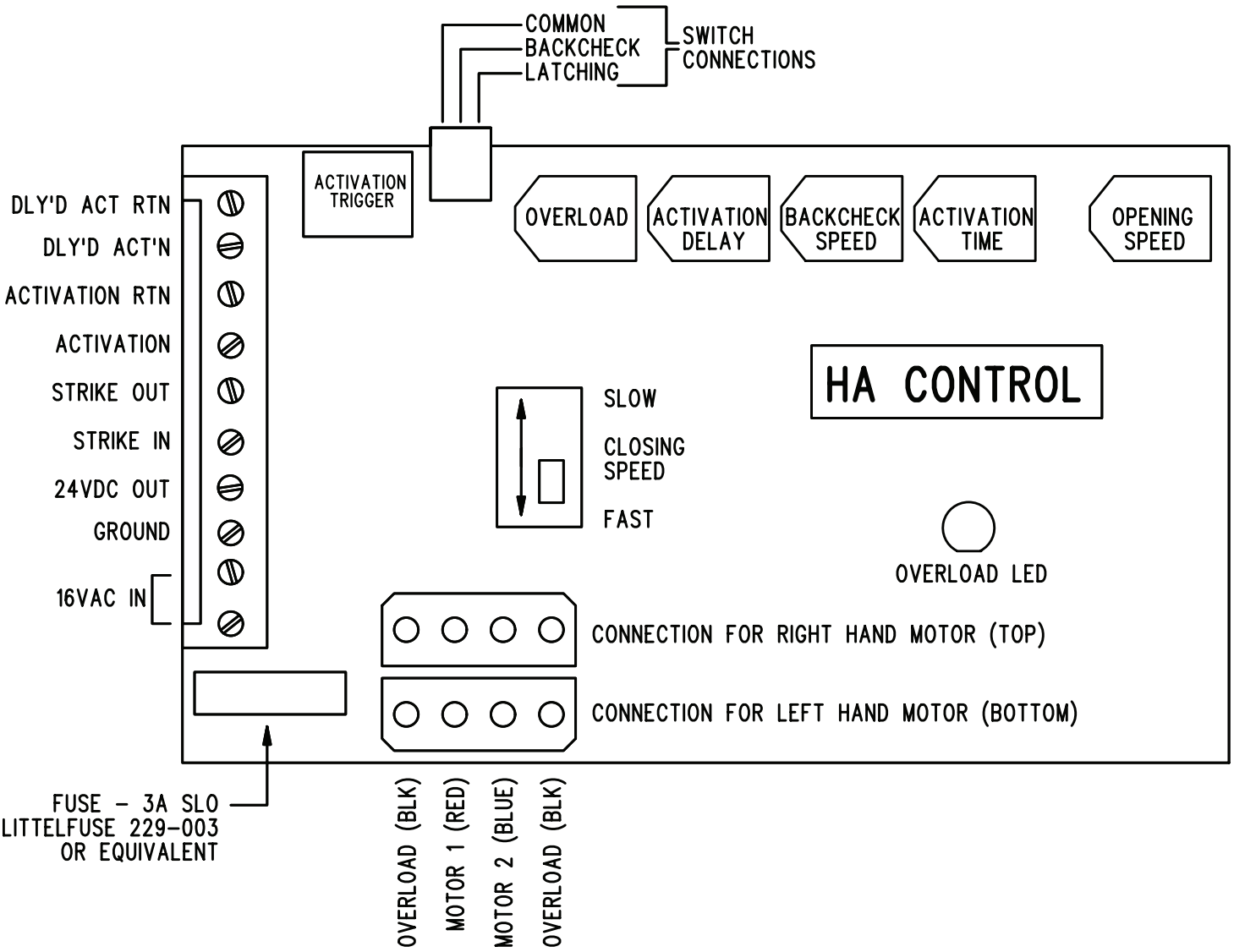
SAFETY 2
- For Safety2 ON and ACT'N1 input ON door will drive at hold speed. If ACT'N1 input OFF, door closes. If Safety2 OFF, door will open.
- ON = Closed contact to ground/common. (i.e. Door mounted sensor on swing side [Superscan])

OUTPUTS

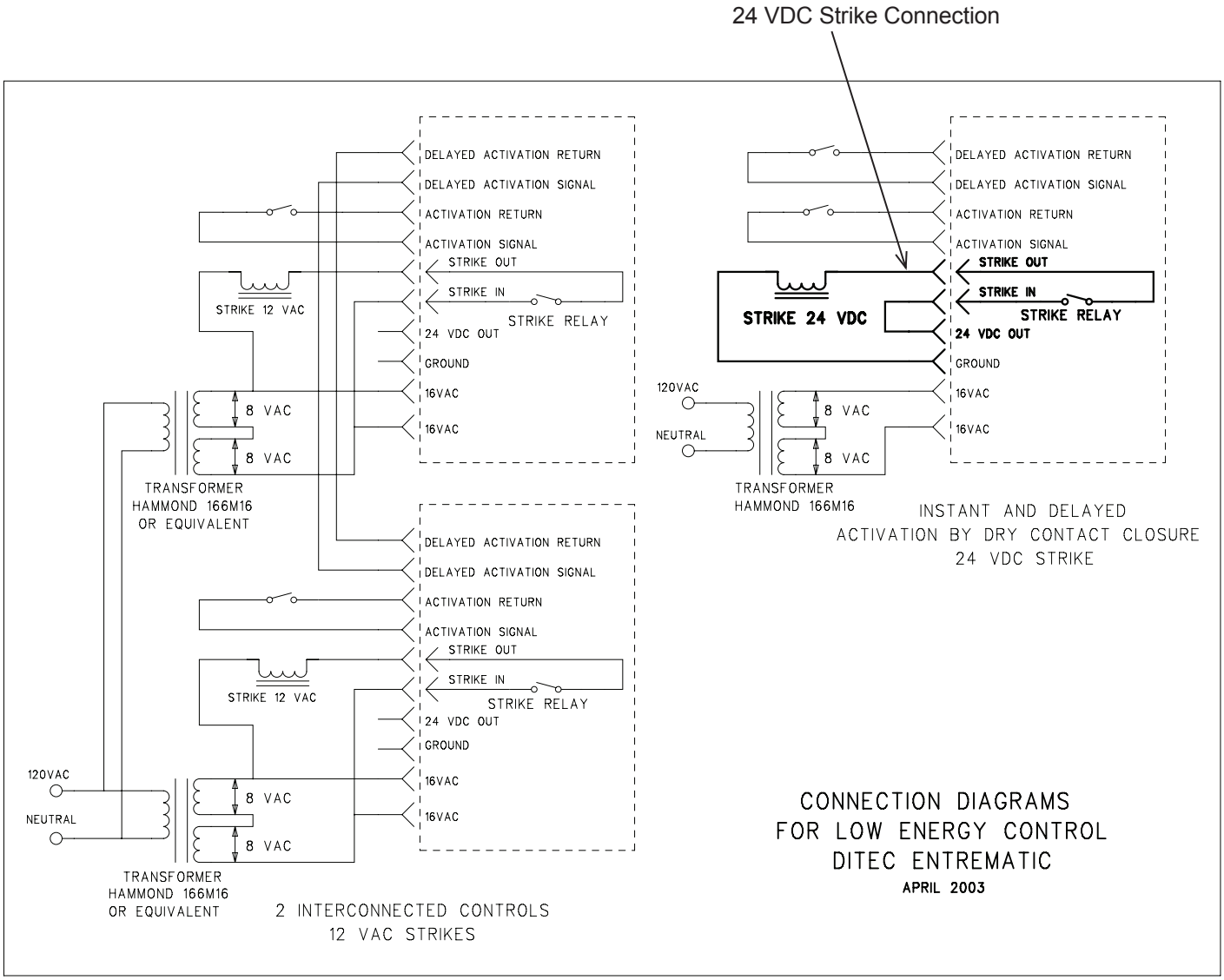
MOTOR
- 2 motor connectors to drive door in either clockwise or counter clockwise direction.

DATA– and DATA+
- interface with BEA Bodyguard sensor. (replaces LO-21K lockout relay)

7.4 Analog Board Diagram



7.5 Analog Board Wiring Diagram



OTHER FEATURES

LOCKOUT	Lockout of door while closing is selectable via Function AA", Setting A2".
PUSH and GO	When Push and Go is selected a manual push of the door will trigger the door to open. Selectable via Function AA", Setting A3". Default is OFF. **Must have operator with no clutch.**
ON/ OFF/ HOLD OPEN	Terminal block position to accommodate a 3 way switch for ON, OFF and Hold Open positions.

7.6 Analog Board (Potentiometer) Specification

INPUTS

AC VOLTAGE

LINE VOLTAGE	TRANSFORMER (Hammond)
120VAC 60Hz	#166M16 – 16VAC – 3AMP
240VAC 50Hz	#266M16 - 16VAC – 3AMP

CURRENT CONSUMPTION
Rest state (door closed) = less than 20mA
Door opening = 1A to 2.5A depending on door speed, size and line voltage
Under worst case conditions (Speed set to maximum, Overload set fully clockwise, high line voltage, very large door) the current consumed can be 3.5A to 4.0A

INST ACT
Instant Activation to open the door (i.e. Push buttons)
ON = Closed contact between Inst Act and Return

DEL'D ACT
Delayed activation to open the door
ON = Closed contact between Del'd Act and Return

OUTPUTS

MOTOR
2 motor connectors to drive door in either clockwise or counter clockwise direction.

STRIKE OUT/IN
Output to turn on strike (24VDC). See wiring diagram.

OTHER FEATURES

BACK CHECK & LATCHING
1 switch for each

CLOSING SPEED
Two possible closing speeds selectable by Slide switch.
Slide switch down is faster speed

OVERLOAD
Selectable Overload setting adjustable by potentiometer. Turning the potentiometer clockwise increases the power that the door will drive at before going into overload.

ACT DLY
Selectable activation delay adjustable by potentiometer. Turning the potentiometer clockwise increases the activation delay. The activation delay starts when the delayed trigger is released. Time is adjustable from 1 second to 20 seconds.

BCHK SPD
Selectable back check speed adjustable by potentiometer. Turning the potentiometer clockwise increases the back check speed

ACT TIME
Selectable activation time adjustable by potentiometer. The activation time starts when the door enters back check. Turning the potentiometer clockwise increases the activation time. Time is adjustable from 1 second to 70 seconds.

OPEN SPEED
Selectable opening speed adjustable by potentiometer. Turning the potentiometer clockwise increases the opening speed.

8.1 Programming Specification (Digital Board)

- **To make changes to the program setting, set 3-position switch to Automatic (I).**
- **Product will not operate when Slide Switch is set to Program mode.**

There are two 7 SEGMENT LED DISPLAYS used for programming:

Function LED = Programmed Function
Setting LED = Value of the Function indicate on First digit

There are 3 switches that relate to programming:

Slide switch

RUN	Function settings can be viewed but Not modified.
PROG (Program)	Function settings can be modified. As a safety feature, THE DOOR WILL NOT OPEN WHEN THE SLIDE SWITCH IS SET TO PROG.

PASS push button To select the next function

SET push button To change the present function value (when the Slide switch is in PROGRAM mode).

Adjusting Settings – Slide Program/Run Switch to:

1 PROGRAM MODE- Functions can be modified.
2 RUN MODE- Function settings can be viewed but not modified.

Programming:

1 Move PROG/RUN Switch to 'PROGRAM'
2 Press PASS Button to scroll through Functions
3 Press SET Button to change present function value
4 Move PROG/RUN Switch to 'RUN' when adjustment is complete
5 Press Activation to test.

OVERLOAD (Opening Torque Adjustment)

Overload is the Torque Adjustment setting for the amount of pressure with which the door pushes against an obstruction, before cutting OFF for safety.

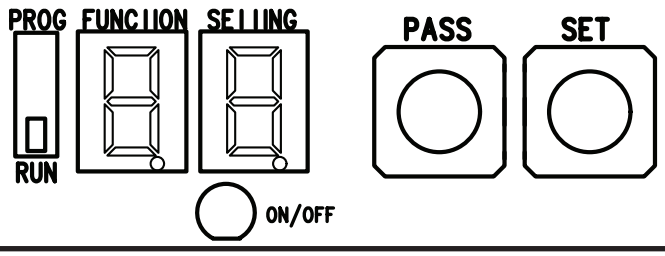
Overload POT - Basic Setting Position for a Standard Door.

1 Turn Overload pot fully counter-clockwise – followed by ¼ turn clockwise.
2 Red Overload LED should not go 'on' when opening.
3 Test with obstruction – door will cut power after about 2 sec and close by spring pressure.

FUNCTION LED	SETTING LED	FUNCTION DESCRIPTION	F.A. & H.C. DEFAULT SETTING
0	0 to F 0 = slowest F = fastest	**OPENING SPEED**	A
1	0 to 5 0 = slowest 5 = fastest	**BACK CHECK SPEED**	1
2	0 to 5 0 = slowest 5 = fastest	**LATCH SPEED**	5
3	0 to 9 0 = slowest 9 = fastest	**HOLD SPEED**	2
4	1 = 2 sec, 2 = 4 sec, 3 = 6 sec, 4 = 8 sec, 5= 10 sec 6 = 12 sec, 7 = 14 sec, 8 = 16 sec, 9 = 18 sec, A = 20 sec b = 22 sec, C = 24 sec, d = 26 sec, E = 28 sec, F = 30 sec	**ACTIVATION TIME** The time that the door remains open, starting when the activation trigger goes OFF. 2 to 30 sec	4
5	0 = 2 sec, 1 = 4 sec, 2 = 6 sec, 3 = 8 sec 4 = 10 sec, 5 = 12 sec, 6 = 14 sec, 7 = 16 sec	**DELAY ON OPERATE** The time delay before operating the door, starting when ACT'N2 trigger goes ON. 2 to 16 sec This is valid when Setting A1 has the LED OFF.	1
6	0 = Instant trigger - extremely sensitive 1 = 1/8 sec - very sensitive 2 = 1/4 sec 3 = 3/8 sec - mid range sensitivity 4 = 1/2 sec 5 = 5/8 sec - not sensitive	**PUSH AND GO SENSITIVITY** The amount of time that a Push and Go trigger must be sensed before the door is triggered. A longer time makes the door less sensitive to a Push and Go.	3
7	1 = 1 sec, 2 = 2 sec, 3 = 3 sec, 4 = 4 sec, 5 = 5 sec 6 = 6 sec, 7 = 7 sec, 8 = 8 sec, 9 = 9 sec, A = 10 sec b = 12 sec, C = 14 sec, d = 15 sec, E = 25 sec, F = 30 sec	**PUSH AND GO ACTIVATION TIME** The time that the door remains open starting when the Push and Go input is triggered.	5
8	0 = 0sec 1 = .50sec 2 = 1.00sec 3 = 1.50sec 4 = 2.00sec	**SAFETY 1 INHIBIT** The time that a Safety1 input is ignored (inhibited), starting when the door goes into Latch.	0
9	0 = 0.125sec 1 = 0.25sec 2 = 0.50sec 3 = 1.00sec 4 = 1.50sec 5 = 2.00sec	**STRIKE DELAY** The time between Strike ON and door starting to open. **HA board ONLY**	0

8.0 CONTROL BOARD PROGRAMMING

CODE INDICATION		ON/OFF LED = ON	ON/OFF = OFF	DEFAULT SETTING
FUNCTION LED	SETTING LED			
A	0	Safety 2 OFF at Back Check	Safety 2 always active	LED OFF
A	1	ACT'N1 is connected to push button and always opens the door. ACT'N2 is connected to the door and is only active after ACT'N1 is pressed and before the door closes and gets to the Latch point.	ACT'N1 Instant activation ACT'N2 A delayed activation *(delay time programmed through Function A5)*	LED OFF ACT'N1 instant ACT'N2 = delayed activation
A	2	Lockout ON – during closing Safety1 is active, if door stops moving (i.e. from hitting an obstruction). Safety1 is NOT active, if door is moving	Lockout OFF Safety1 is always active	LED ON Lockout ON
A	3	Push and Go is active. It will only work with a door that DOES NOT have a clutch	Push and Go disabled	LED OFF Push and Go Disabled
A	4	Reading out numbers of door opening cycles	No readout	LED OFF No readout
	To obtain the number of opening cycles that the door has gone through, Press SET button while FUNCTION= A, SETTING= 4. Example: Readout of 3 2 (pause) 7 0 = 3,270 door cycles			
A	5	Safety1 sensor mounted on closing side of door	Safety1 sensor mounted overhead	LED OFF Safety1 mounted Overhead
A5 - LED OFF (Overhead Sensor)	Door Opening - Safety1 sensor has no effect Door Fully Open - Safety1 sensor ON = door will not close Door Closing - A2 setting ON. Door moving = Safety1 has no effect (door will open) - A2 setting ON. Door stopped, Safety1 ON = door will not open - A2 setting OFF. Safety1 ON = door will not open Door Fully Closed - Safety1 sensor ON = door will not open			
A5 - LED ON (Door mounted Sensor)	Door Opening - Safety1 sensor has no effect Door Fully Open - Safety1 sensor ON = door will not close Door Closing - Safety1 sensor ON = door drives at HOLD speed Door Fully Closed - Safety1 sensor has no effect			



CODE INDICATION		ON/OFF LED = ON	ON/OFF = OFF	DEFAULT SETTING
FUNCTION LED	SETTING LED			
A	6	Safety1 sensor is a Normally Closed input (N.C.)	Safety1 sensor is Normally Open input (N.O.)	LED OFF – Safety1 is Normally Open
A	7	Safety2 independent of Act'n1 Safety2 is ON = door holds Safety2 is OFF = door opens	Safety2 works with Act'n1 Safety2 & Act'n1 both ON = door holds If Safety2 is OFF = door opens If Act'n1 is OFF = door closes.	LED OFF Safety2 works with Act'n1.
A	8	Only for Fire door mode in California. Manually pulling the door closed while it is fully open will close the door ignoring all activation triggers including Hold Open. Turning to OFF resets this mode.	Door will not shut when manually pulled closed	LED OFF

When setting up A8, it is important to follow the steps below:
1. **Turn the overload all the way down (counter clock wise for Analog Potentiometer)**
2. **Make sure Back Check speed is slow enough that it will not trigger the overload while the door is fully open.**

RESET TO DEFAULT SETTING - Pressing both SET and PASS buttons for 5 seconds

9.0 TROUBLESHOOTING

PROBLEM	POSSIBLE
Programming function does not work	1. Make sure ON/OFF switch is connected. A switch must be connected from ON terminal pin to OFF terminal pin for programming to work 2. Slide switch must be set to PROG for programming options to be modified
Door does not open after triggered	1. Check power supply and is ON (7 segment LEDs will light up) 2. Slide switch should be set to RUN 3. Check which activation situation is selected. See setting A1 - If LED is ON for setting A1, ACT'N2 will only activate the door while it is closing and has not reached Latch 4. Check if ON/OFF switch is connected. A switch must be connected from ON terminal pin to the OFF terminal pin for the doors to open
Door does not open if triggered immediately after going into Latch	Increase the Safety1 inhibit time. See Setting 8
Push and Go function does not work	2. Only an operator WITHOUT a clutch will work for Push and Go Operators with a clutch cannot provide Push and Go. 3. Check if Push and Go function enabled, See setting A3 4. Reduce Push and Go sensitivity, See setting 6
Door does not delay when triggered even when a delayed time has been set up	1. See setting A1 - If LED is ON for program setting A1 this is a special activation situation and there is no delay 2. ACT'N1 must be used for push button (built in delay adjustable at setting 9)
Door opens slowly	1. Check to see if Back Check and Latching magnets are adjusted properly 2. Increase opening speed - Function 0
Door will not Open	1. Make sure the door is unlocked and main power is on 2. Remove obstacle that could be causing the door not to open 3. Make sure 3 position switch is sets to Automatic
Door will not Close	1. Remove any obstacle from in front of the door, which is activating the sensor (if equipped), thus keeping the door open 2. Make sure the 3 position switch is set to Automatic

If the problem persists, contact your authorized Ditec Entrematic representative for service!

Low Energy Operator Adjustment to ANSI A156.19 standard

The following specifications are based on neutral air pressure conditions.

Opening Speed
Minimum opening time to back check or 80 degrees is 3 seconds or longer. Total opening time shall be 4 seconds or longer.

Closing speed
The minimum closing time to latch check depends on the size and weight of the door as follows:

Door Leaf Width - Inch(mm)	Up to 100 lbs (45kg)	Up to 140 lbs (64kg)
39 (914) & Less	2.0 sec	2.3 sec
Door Leaf Width - Inch(mm)	**Up to 110 lbs (50kg)**	**Up to 150 lbs (68kg)**
42 (1067)	2.3 sec	2.7 sec
Door Leaf Width - Inch(mm)	**Up to 120 lbs (55 kg)**	**Up to 160 lbs (73kg)**
48 (2119)	2.8 sec	3.2 sec

For doors of other weights and widths, use the formula below:

$$T = \frac{D \cdot \sqrt{W}}{188}$$

W = Weight of door (lbs)
D = Width of door (Inch)
T = Closing time to Latch Check (sec)

Latch check
The door must not close through the final 10 degrees in less than 1.5 seconds.

Adjustments for ADA (Americans with Disabilities Act)
Adjustments are provided for Opening speed, Back Check speed, Activation Time (Hold Open), Activation Delay, and Overload current with LED indicator.

Detection of an Overload
Current is persisting for longer than 2 seconds will cause the door to close. See below recommended procedure for adjustment of the control:

1. Turn the Overload (current) control fully clockwise to increase the current limit to maximum and prevent any detection entirely. This setting can be used to inhibit the overload detection / shutdown feature.
2. Adjust Opening speed as desired. Note that the control has a built in time reference of 4.0 seconds. Operation of the door will not be affected. However, if the door moves from close to Back Check in less than 4.0 seconds, the LED will flash as the door closes to indicate that the Opening speed may be a little fast.
3. Lock or obstruct the door and apply an Activation Trigger. Turn the Overload control counter clockwise until the LED becomes steadily illuminated, to indicate detection of excessive current. The control may be turned counter clockwise a little more to ensure positive detection. After 2 seconds the door will close.
4. Adjust the Activation Time (hold open) as desired, Minimum of 5 seconds
5. Adjust the Activation Delay time as desired. This will depend on the distance of the activation devices to the door

11.1 Additional Components: Sensor(s) / Knowing Act Devices

Safety Sensors

The control board can accommodate overhead and door mounted safety sensors. To permit safe passage through, the closing door will reverse (if equipped with door mounted safety sensor) to full open position, if an obstruction is encountered during the closing phase. If equipped with door monitor sensor, the operator will then resume its standard closing cycle and repeat when the obstruction remains.

- If equipped, the safety sensor on the closing side of the door will activate while the door is closing. The door will reverse to open.
- If equipped, the safety sensor on the opening side of the door is activated by another pedestrian while the door is opening, the door will stall until that pedestrian has left the opening area.
- If the door is equipped with an overhead safety sensor, the door will not open when there is an obstruction or pedestrian in the swing path.
- If the door is equipped with an overhead presence sensor in the closed position, the door will not open when there is an obstruction or pedestrian in the swing path.

Activation Devices

The HA8-LP Operator is compatible with all devices using a dry contact switch, usually hardwired or radio controlled. All activation signals should be wired to Activation 1 and Common. When a door is used in a vestibule the built-in sequence can be used to allow both doors to operate in sequence. This is achieved by wiring Activation 2 and common on both boards together. The delay at which the second door opens after the first door opens is set using Function 5 on the programming schedule, up to 5 sec delay is achievable.

Jamb mounted switches

It can be used but are not practical for individuals using a wheelchair because of their range of motion (positioning their wheelchair to clear the door opening). (See Section 1.5) In a vestibule entrance a switch must be installed in the vestibule space to prevent entrapment and the doors can be sequenced to ease the traffic flow and limit the time of both doors being open to outside weather conditions.

Push Plate or Knowing Act Devices

- Test the knowing act device. The door should swing smoothly to the open position and stop without impact. After a time delay (normally 1s to 5s) the door should close smoothly.
- Repeat on the other side of the opening if the door has two-way operation.
- If there is more than one push plate or Knowing Act Device on each side of the door, each should be tested.

Electric Strike

The HA8-LP Operator control board is capable of supplying power (24VDC, 6W or 250 mA) to the electric strike. The power is supplied from the board on an ADA unit. When the door is triggered a contact closure occurs across Ground and N.O. or N.C. to energize the strike. The contact closure is applied 200 msec. Before door activates and continues for 2 seconds after the door begins to open, the electric strike operation is achieved by connecting 24 VDC to strike in (terminal 4 to terminal 5 of the terminal block) and connecting the strike power wires to strike out (terminal 6) and ground (terminal 3).The strike has a delay function from 0.125 seconds - 2 seconds.

Analog board connection – strike out +ground, jumper between strike in + 24DC

Digital Board connection – N.O. + GND

Fully automatic boards do not support electric strike.

11.2 Header Cover Installation

After all adjustments have been finished, the face cover must be installed to the header box. There are 8 counter sunk screw locations on the underside of the face cover, the outside pairs, mount to the header box. The inside pairs thread into the drive unit mounts, take care starting the ¼ X 20 NC machine screws as the mounting brackets are mounted, allowing them to sometimes be slightly off-centre to the face cover holes.

11.3 Safety Decals

Install all safety, traffic control, and instruction decals to the door as required. This is very important. Failure to do this leaves the installer LIABLE for any accident that might occur. This must be done!

A summary of the ANSI standard 156.19 requirements for safety decals is as follows:
Each decal shall be mounted on the door at a height of 58 ± 5” (1470 ± 130 mm) from the floor to the center line of the sign. The sign chosen will depend on the classification of the door operator.

Clean the area well before applying the decal. Remove the upper portion of the backing and roll the decal onto the door in a slow motion. Check to confirm the decal is straight. Use a flat edged soft spreader to smooth out the decal. Remove the lower backing from the decal and smooth out any air pockets.

After all adjustments have been finished, the face cover must be installed to the back plate by snapping cover into position.

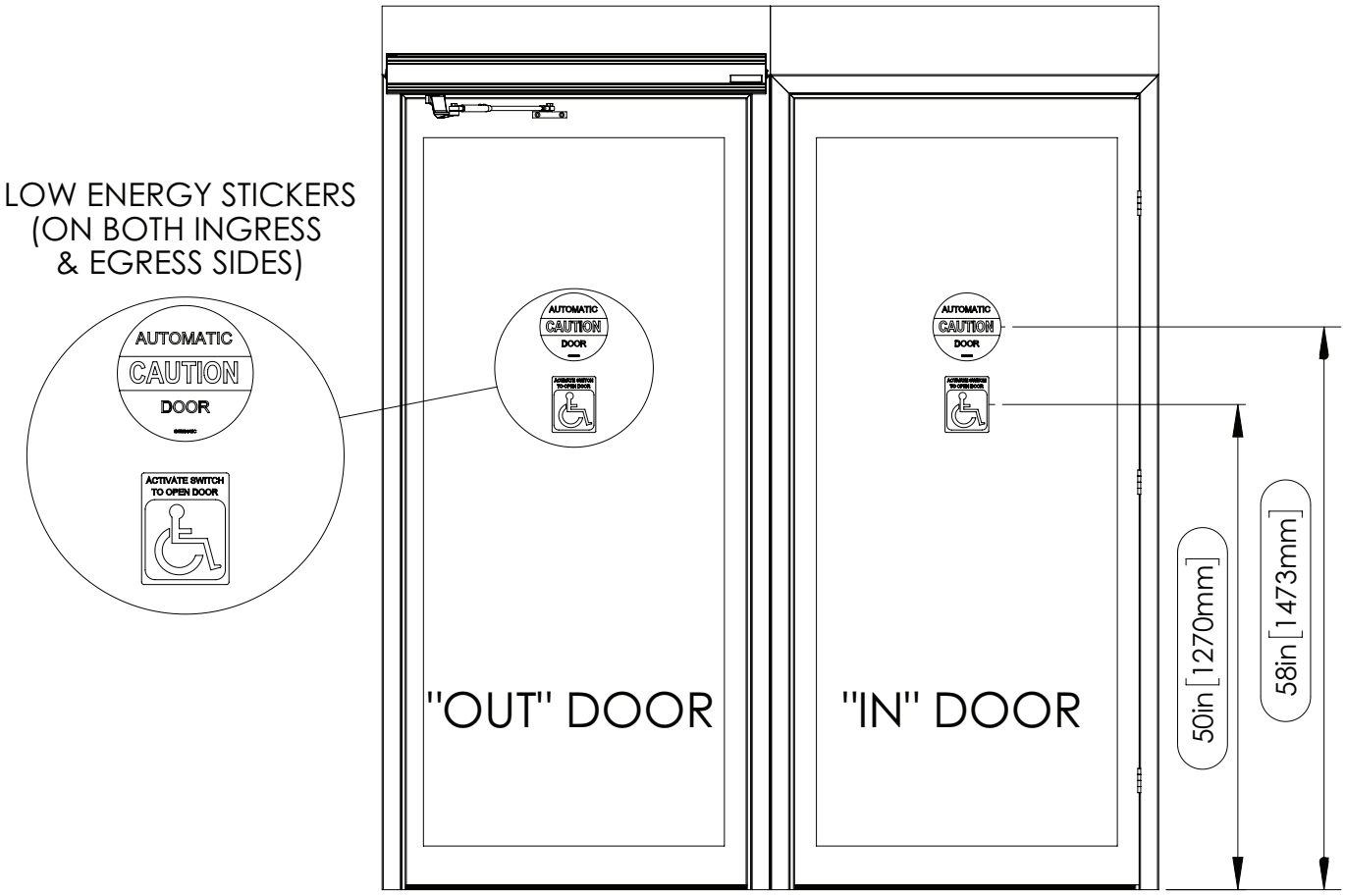
WARNING!
Before leaving the job site,

- **Clean up the work area**
- **Make sure all bolts are tight**
- **Clean glass**
- **Install safety decals**

Safety Sticker Placement Example

The center of the sticker height should be between 38” [965 mm] and 62” [1574 mm], above the finished floor.

See ANSI standard 156.19 requirements for additional safety decal information.



12.0 MANUFACTURER INFORMATION

Manufacturer and Shipping Address

Entrematic Canada Inc.
221A Racco Parkway
Vaughan, ON
L4J8X9
Toll Free: 1-877-348-6837
Local: 905-886-8160
Fax: 905-886-7656
Email: info.ditec.ca@entrematic.com

Entrematic USA Inc.
Shipping (Returns Materials)
1310 Airport Road, Suite C
Monroe, N.C. 28110
Toll Free: 1-866-901-4284
Local: 704-290-0980
Fax: 704-919-5014
Email: info.ditec.us@entrematic.com

Series Model: HA8-LP
HA8-LP Installation Manual Part# W5-640

Code & Standard
The operator complies with the following codes and standards:

- UL STD.325 & ANSI/BHMA STD. A156.19; Fire rated UL STD. 10 (b); UL STD. 10(c); NFPA STD. 252
- CAN/CSA STD. C22.2 NO. 247 & CAN/ULC STD. S104

Ditec

ENTREMATIC

Entrematic Canada Inc.
Toll Free: 1-877-348-6837
info.ditec.ca@entrematic.com
www.ditecentrematic.ca

Entrematic USA Inc.
Toll Free: 1-866-901-4284
info.ditec.us@entrematic.com
www.ditecentrematic.us