

TRADEMARK
HARDWARE

Contents

Certifications and Standards.....	2
Technical Data	2
Product Safety Warnings	2
Before You Begin	3
Installation	3
Template.....	8

Certifications and Standards

- ETL Certified: Operator conforms to ANSI/UL standard 325 for automatic closing doors and UL10C Positive Pressure Fire Test for Door Assemblies.
- ANSI A156.19: These products are designed to conform to this specification “for power assist and low energy power operated doors.” These products are designed to exceed all the requirements for “Low Energy Power Operated Door”.
- Americans with Disabilities Act (A.D.A.): These door operators can be installed and adjusted to conform with A.D.A. regulations.
- ANSI A117.1: These door controls permit door assemblies to conform to the requirements of this specification “for buildings and facilities - providing accessibility and usability for physically handicap people”.

Technical Data

Input power:	120VAC, 60Hz 3.0A
Power supply:	24 V DC, max. 6.5 Amp. ; 1.3A Available for Acc.
Door width:	36 - 48" (91-122 cm)
Door weight:	90-250 lb. (41-113 kg)
Push min angle:	110° with reveal of 6-3/4" max
Push max angle:	130° with reveal of 1/8" min
Pull max angle:	180°
Hold open time:	5-30 seconds (A.D.A. 5 seconds min.) Indefinite for Hold Open Input or Endcap 3 Position Switch

Notes:

- Permanent wiring is to be employed as required by local codes.
- Activation devices: push plates, access control, mats, touchless wall switches, etc.
- Maximum wire size is:
12AWG at terminals LINE and NEUTRAL
(120VAC; 60Hz) on Power Input Terminal
14AWG at all other terminals

Product Safety Warnings

WARNING: To reduce risk of injury to person, use this operator only with Pedestrian Swing doors. **FOR INDOOR USE ONLY**

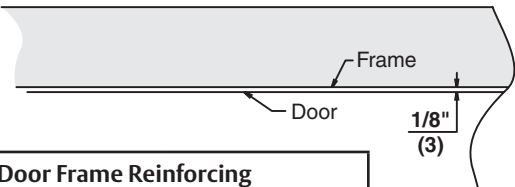
1. READ AND FOLLOW ALL INSTRUCTIONS.
2. Install only on a properly operating and balanced door. A door that is operating improperly could cause severe injury. Have qualified service personnel make repairs to any hardware before installing the operator.
3. Remove, or make inoperative, all locks (unless mechanically and/or electrically interlocked to the power unit) that are connected to the door before installing the operator.
4. Do not connect the door operator to the source power until instructed to do so.
5. Never let children operate or play with door controls. Keep remote control (when provided) away from children.
6. Personnel should keep away from a moving door in motion.
7. Test door's safety features at least once a month. After adjusting either force or limit of travel, retest door operator's safety features. Failure to adjust operator properly may cause severe injury or death.
8. KEEP DOOR PROPERLY OPERATING. See Door Manufacturer's Owner's Manual. An improperly operating door could cause severe injury or death. Have a trained door systems technician make repairs.
9. SAVE THESE INSTRUCTIONS.

Before You Begin

- Thickness recommended for reinforcements in hollow metal doors and frames is charted.
- This template information based upon use of 5" maximum width butt hinges.
- Maximum frame reveal is 1/8" up to 6-3/4" maximum for 6331 units.
- Before beginning the installation, verify that the 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.

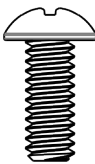
Fasteners for Frame:

- 1/4-20 Machine screws for hollow metal and aluminum.
- No. 14 x 2-3/4" (70mm) long sheet metal screws for wood.



Hollow Metal Door Frame Reinforcing		
Frame Material	Reinforcing	
	Recommended	Min. Required
12 Ga. .1046 (2.66)	12 Ga. .1046 (2.66)	18 Ga. .0478 (1.21)
14 Ga. .0747 (1.90)	10 Ga. .1343 (3.41)	12 Ga. .1046 (2.66)
16 Ga. .0598 (1.52)	10 Ga. .1343 (3.41)	12 Ga. .1046 (2.66)
18 Ga. .0478 (1.21)	8 Ga. .1644 (4.18)	10 Ga. .1343 (3.41)

Installation



A. Mount backplate.

1. Determine right hand or left hand installation. (Figure 1)
2. Measure and mark first mounting hole according to template. (Figure 2)
3. Attach backplate to frame with screw.
Do not fully tighten screw at this time.

For Metal Frames:

Use #7 drill and 1/4-20 tap for 1/4-20 machine screws.

For Wood Frames:

Use 3/16" drill and supplied screws for self drilling, self tapping screws.

4. Ensure backplate is level and aligned with door frame. (Figure 3)
5. Using backplate as guide, mark and drill second hole. (Figure 3)
6. Insert second screw and tighten both screws.
7. Using backplate as a guide, drill and tap remaining eight (8) holes in frame. (Figure 3)
8. Secure with eight (8) screws and tighten.

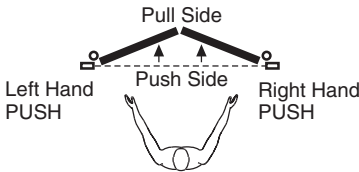


Figure 1

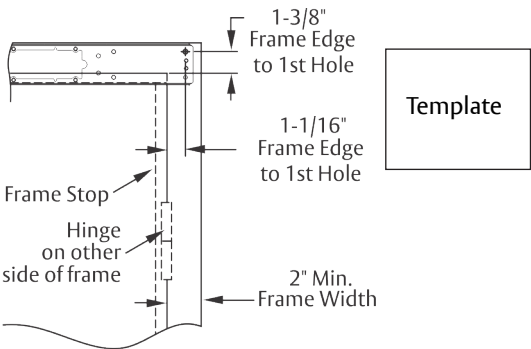


Figure 2 Right Hand Shown

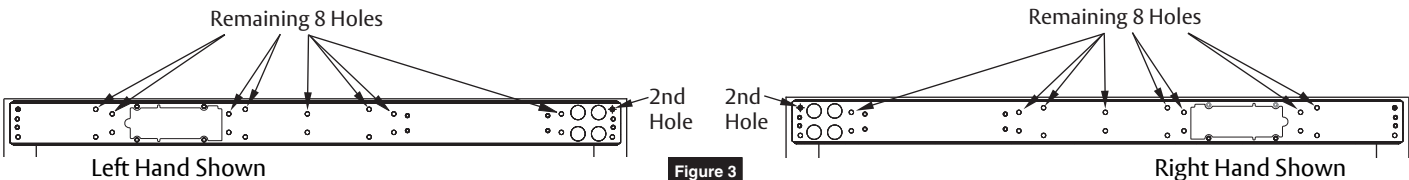
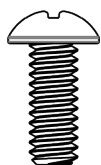
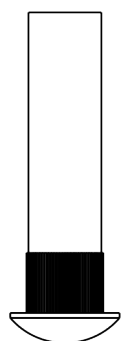
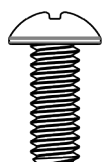


Figure 3



OR



B. Mount arm tube with shoe.

1. Measure and mark first arm mounting hole using template. (Figure 4)
2. Drill holes.
 - a. For reinforced doors, drill and tap holes with #7 drill and 1/4-20 tap.
 - b. For wood doors or self-drilling screws, use 3/32" drill.
 - c. For sleeve nuts and bolts, see illustration. (Figure 5)
3. Mark and drill second hole using arm tube shoe as template.
4. With longer side of arm shoe toward hinge, secure arm tube to door. (Figure 6)

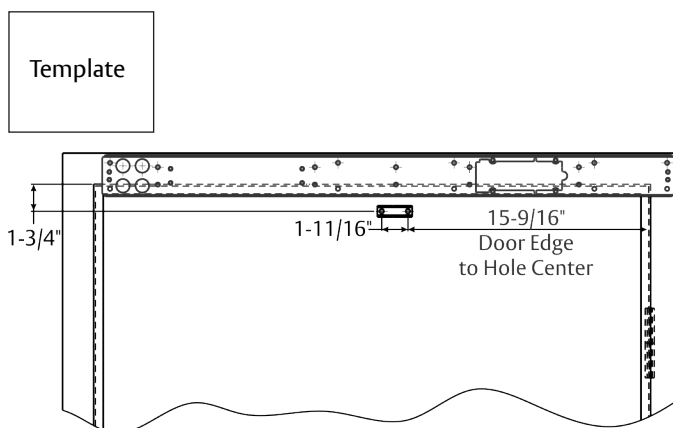


Figure 4

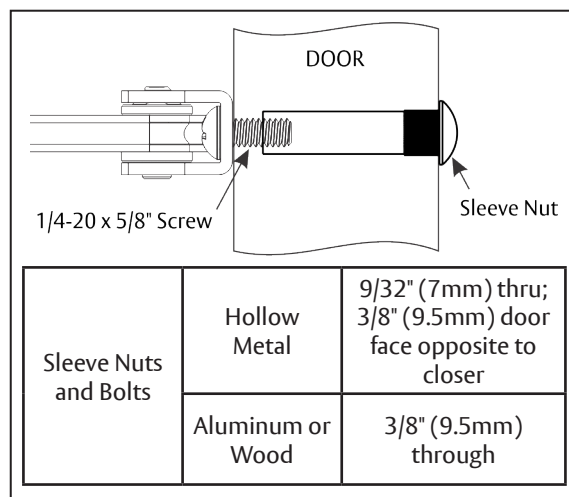


Figure 5

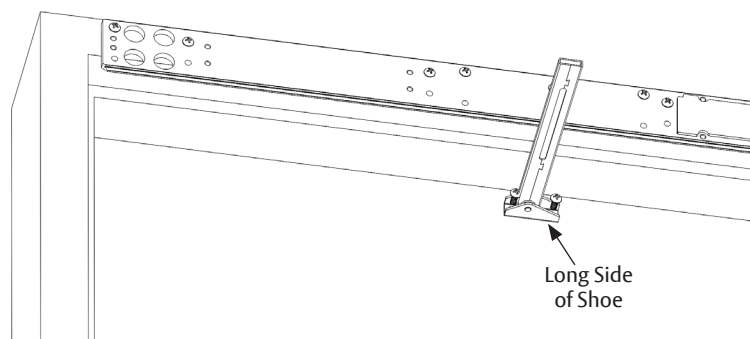
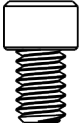


Figure 6



C. Install end caps.

1. Install two (2) screws on each end of backplate leaving about 3/16" gap between head of screw and backplate. (Figure 7)
2. Slide end caps behind screw heads and tighten screws. (Figure 7)

NOTE: End cap with 3-position switch is always located on conduit side of backplate.

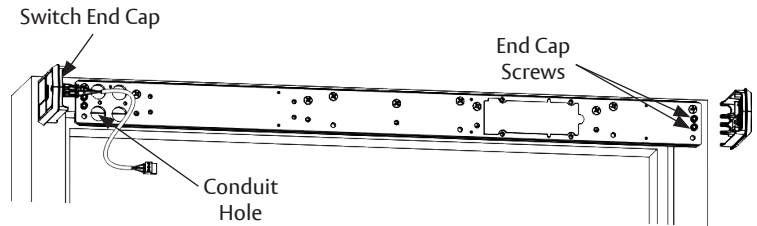
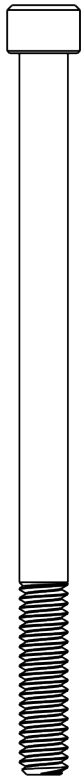


Figure 7

NOTE: To retrofit closer assembly to an existing operator, screws and fan inside of end cap must be removed.



D. Install closer body assembly.

1. Using four (4) screws, install closer body to backplate. (Figure 8)

Note:

- Screws must be tightened in a cross pattern until all four (4) screws are tight. (Figure 8)
- Closer body is in proper orientation for PUSH SIDE application when tube is NEAR backplate. (Figure 8)

2. Using three (3) supplied cable management clips, secure cables along closer body. (Figure 9)

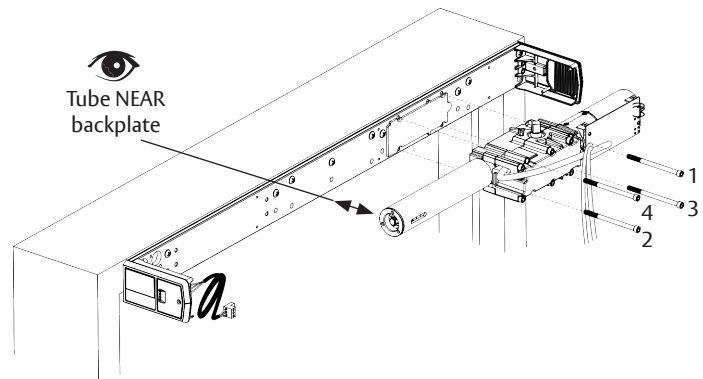


Figure 8

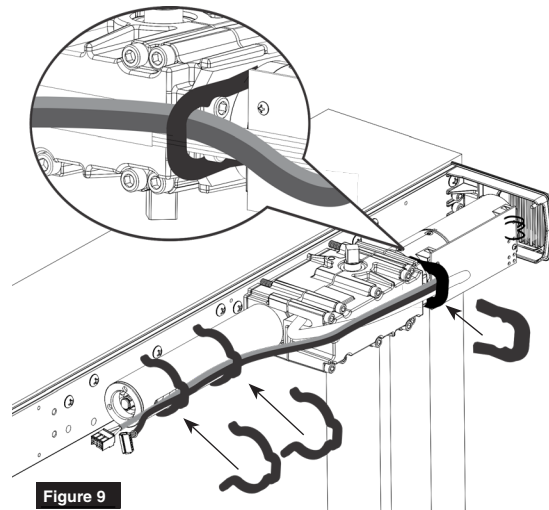
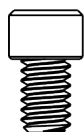


Figure 9



E. Install power supply assembly.

1. Insert two (2) screws. Leave 3/16" gap between head of screw and backplate. (Figure 10)
2. Slide power supply key holes over screws allowing narrow slots of key holes to rest on screws. (Figure 10)

NOTE: Narrow slots of key holes are always at top and control board is always at bottom for proper installation. (Figure 10)

3. Tighten screws.
4. Plug motor and ribbon cables from closer body into power supply. (Figure 11)

NOTE:

- Use slot in power supply to feed connectors to board. (Figure 11)
- Use provided zip ties to manage any excess cable between closer and power supply so that cover can be attached without damaging cables. (Figure 11)

5. Connect 3 Position switch on end cap to power supply. (Figure 11)

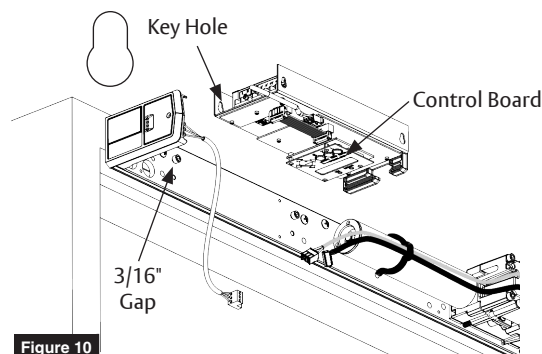


Figure 10

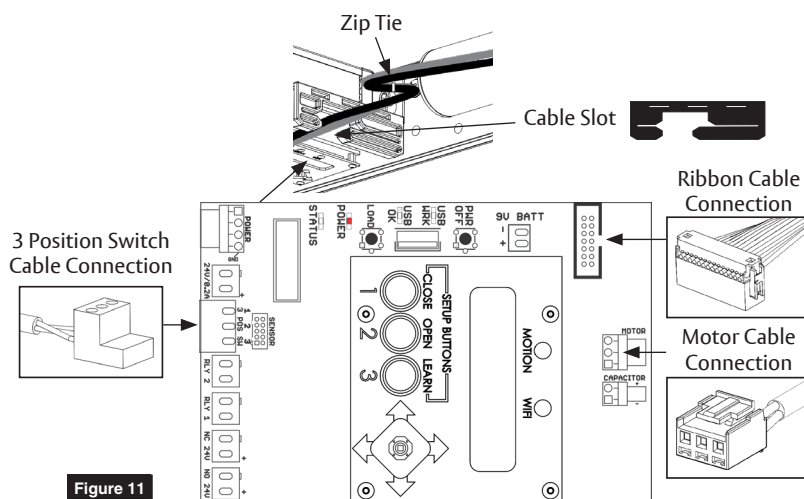


Figure 11



F. Install main arm.

1. Using hex wrench, secure main arm to bottom pinion with screw and nut. (Figure 12)
2. Slide main arm rod into tube arm. (Figure 12)

NOTE: If necessary, open door for rod to slide into tube.

3. With door fully closed, rotate main arm toward latch edge of door until arm tube is at 90° angle (perpendicular) to door. (Figure 13)
4. Use arm screw provided with main arm to secure rod to tube. (Figure 13)

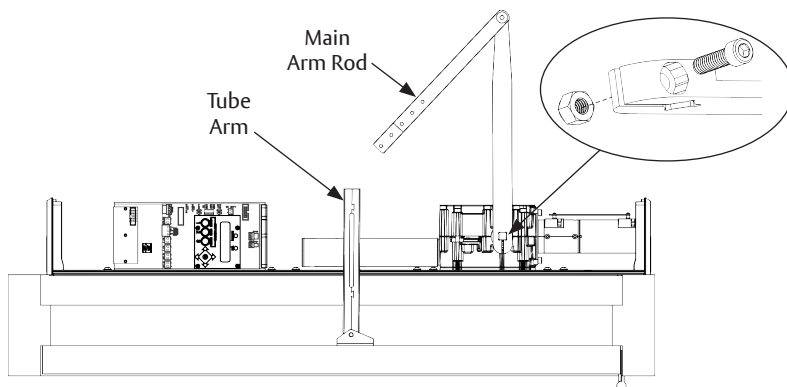


Figure 12 View: Looking up from floor

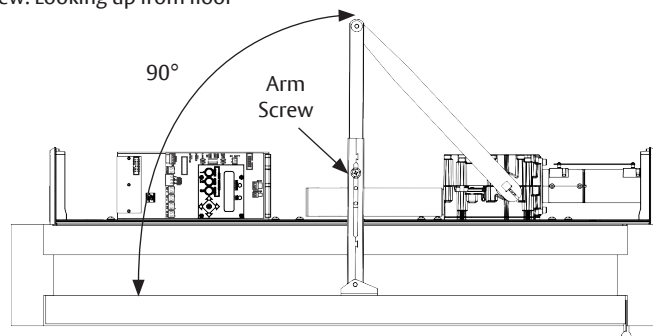


Figure 13 View: Looking up from floor

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G. Adjust closing force.

NOTE: The amount of effort to manually open or close a door is called closing force.

1. Using 1/2" socket wrench with 3/4" deep well socket, turn nut in end of closer body tube to desired force. (Figure 14)

NOTE: Window in closer tube shows spring. (Figure 15)

NOTE: If additional closing force is only required in latching region, see Latch Boost and Lock Release features in separate programming manual 80-9363-0015-020.

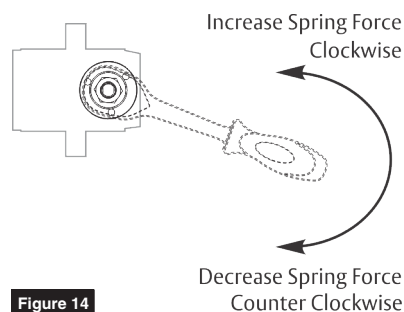


Figure 14

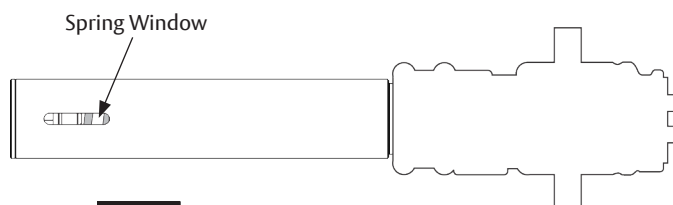


Figure 15

H. Attach cover and end cap label plates.

NOTE: Attach cover after initial programming has been done. See separate programming manual 80-9363-0015-020.

1. Align cut-outs in cover to pinion shafts. (Figure 16)
2. Slide cover onto unit using end caps as guides.
3. Snap cover securely to back plate.
4. Attach a Norton label plate to each end cap by snapping into place by hand with gentle pressure. (Figure 16)

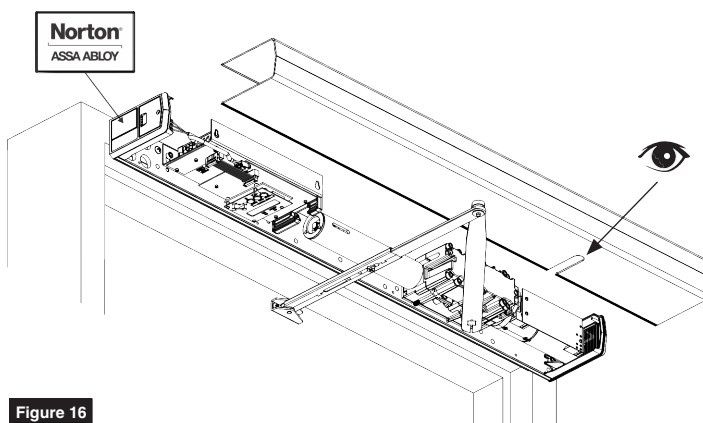


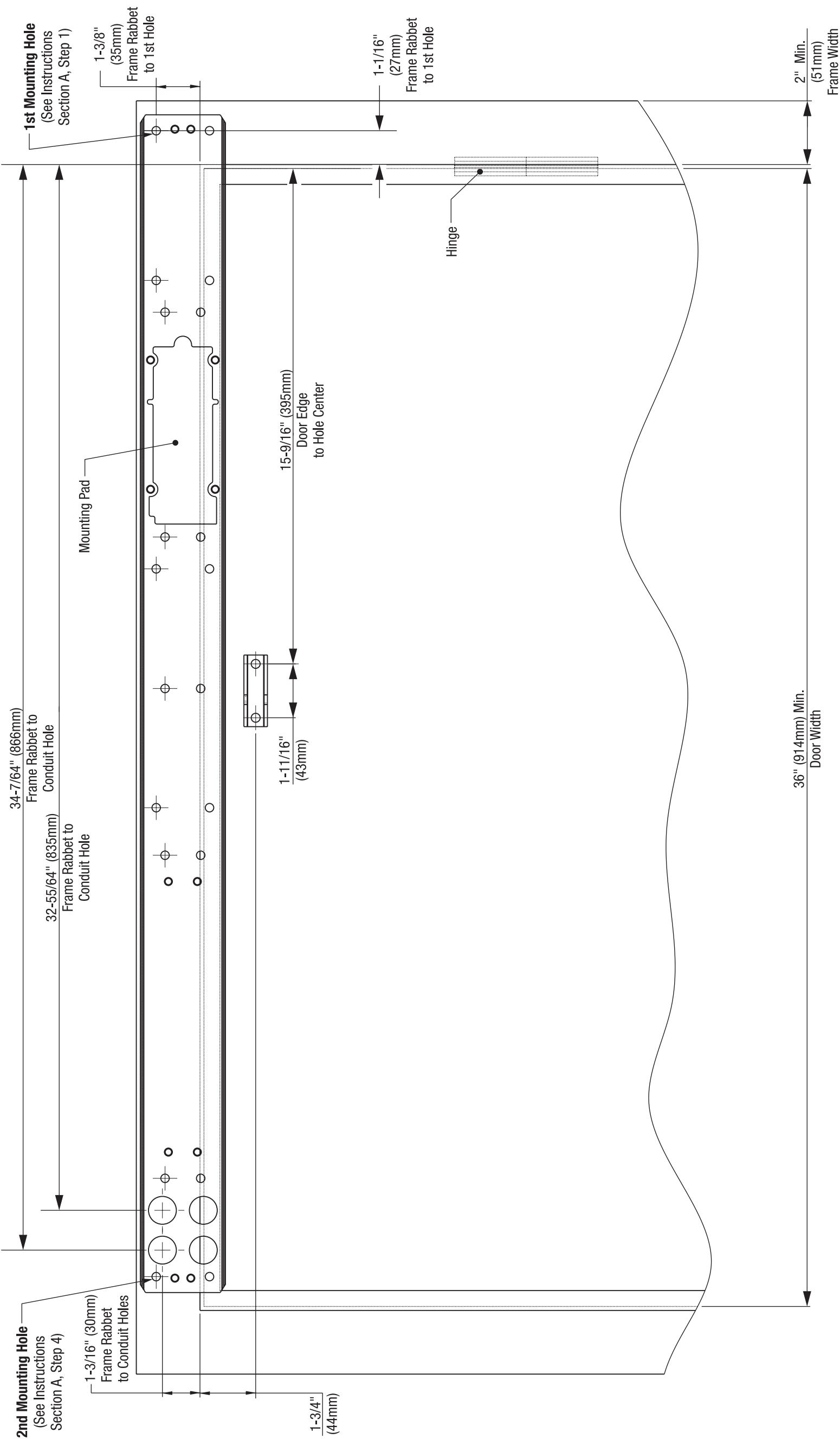
Figure 16



WARNING: Make sure no wiring is loose or can be caught by cover when it is snapped into place.

You've now installed the 6331 PUSH SIDE Low Energy Operator.
Continue with separate Programming Manual 80-9363-0015-020 to set up and adjust operator.

6331 Series Template
Push Side Application ONLY
Right Hand Door Shown



NOTE:
Ten (10) mounting holes and two (2) conduit holes to be drilled are shown with center marks. 
Dimensions given in inches (") and millimeters (mm).