

5200 Series Full Feature Low Energy Operator

Model 5211 (Pull Side)

Installation Instructions



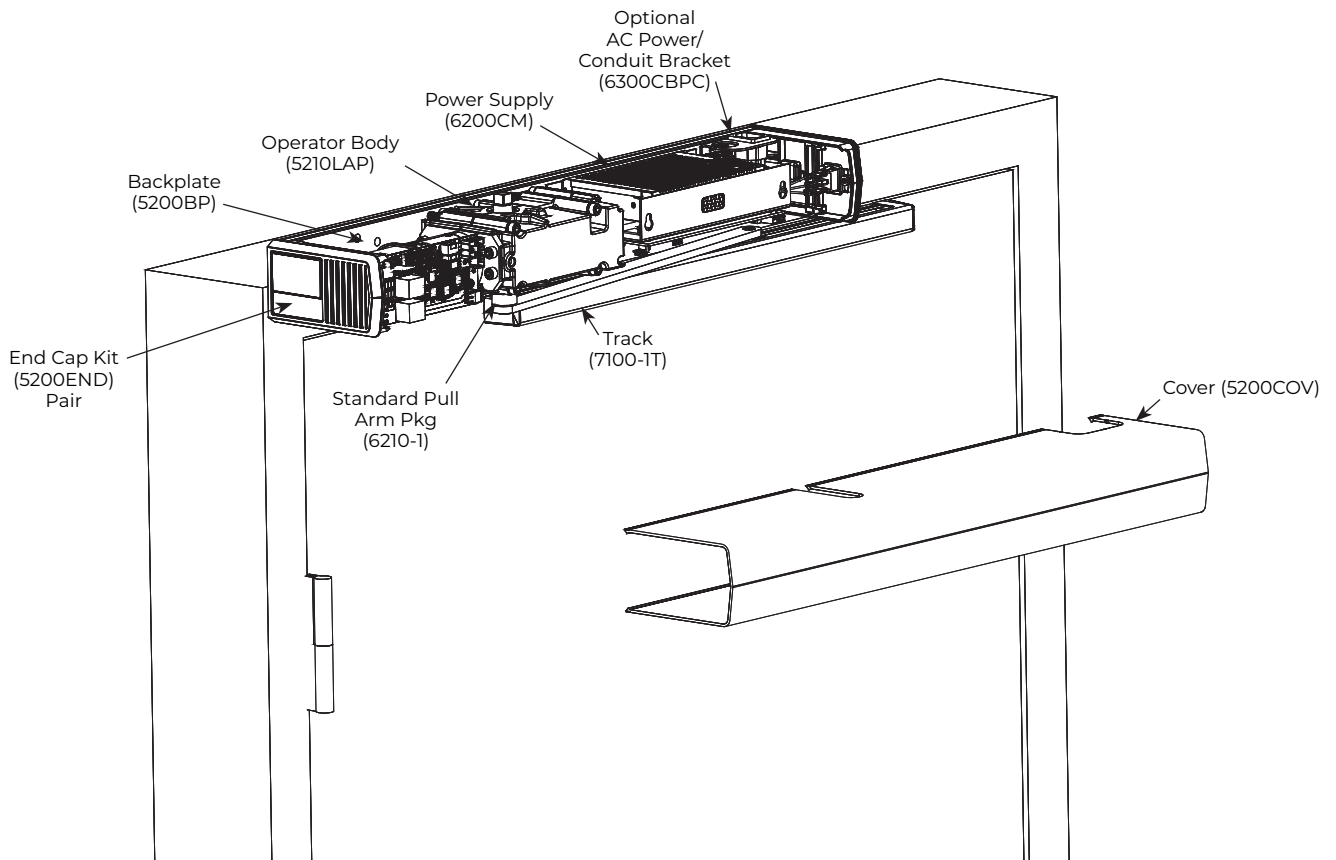
ASSA ABLOY

⚠ WARNING

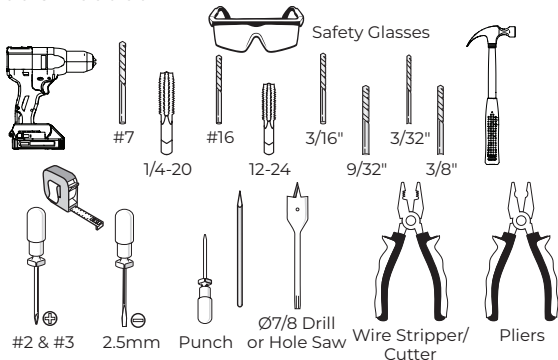
This product can expose you to lead which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov.

Pour la version française voir NortonRixson.com.
READ AND FOLLOW ALL INSTRUCTIONS.
SAVE THESE INSTRUCTIONS.

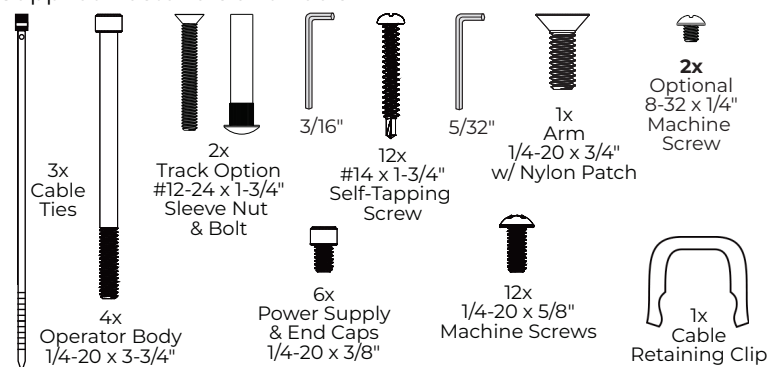
5211 Pull Side Up to 120° opening



Tools Needed



Supplied Fasteners and Tools



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Certifications and Standards

- ETL Certified: Operator conforms to ANSI/UL standard 325 for automatic closing doors.
- 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 disabled people”.

Technical Data

Input power:	120VAC, 60Hz 3.0A
Power supply:	24 V DC, max. 4.5 Amp. ; .4A Available for Acc.
Door width:	36 - 48" (91-122 cm)
Door weight:	90-200 lb. (41-91 kg)
Push max angle:	130° with reveal of 1/8" to 3-1/4" (3 to 82.5 mm)
Pull max angle:	120°
Hold open time:	5-30 seconds (A.D.A. 5 seconds min.) Indefinite for Hold Open Input or End Cap 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 or latches that could prevent the operator from opening the door. The operator is capable of powering a retracting latch or other exit devices to enhance the security of the opening.
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.
7. Test operator’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 OPERATING PROPERLY. See Door Manufacturers Owners Manual. An improperly operating door could cause severe injury or death. Have a trained door systems technician make repairs.
9. SAVE THESE INSTRUCTIONS.

5200 Series (PULL Side) Power Operator

Before You Begin

- Thickness recommended for reinforcements in hollow metal doors and frames as specified in the chart.
- This template information based upon use of 5" (127mm) maximum width butt hinges.
- Maximum frame reveal is 1/8" for 5211 units.
- Before beginning the installation, verify that the door frame is properly reinforced and is well anchored in the wall.

For concealed wiring:

- Use template on page 8 to drill conduit holes in the door frame, prior to running concealed electrical conduit and switch/sensor wires.
- Wires should be pulled through the frame prior to operator installation.

Fasteners for Frame:

- 1/4-20 machine screws for hollow metal and aluminum.
- #14 x 1-3/4" self-drilling, self-tapping screws for wood.

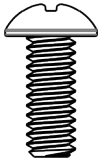


Hollow Metal Door Frame Reinforcing		
Frame Material	Reinforcing	
	Recommended	Min. Required
12 Ga. .104 (2.66)	12 Ga. .104 (2.66)	18 Ga. .047 (1.21)
14 Ga. .074 (1.90)	10 Ga. .134 (3.41)	12 Ga. .104 (2.66)
16 Ga. .059 (1.52)	10 Ga. .134 (3.41)	12 Ga. .104 (2.66)
18 Ga. .047 (1.21)	8 Ga. .164 (4.18)	10 Ga. .134 (3.41)

Installation

A. Mount the backplate.

1. Determine right hand or left hand installation. (Figure 1)
2. Measure, mark, and drill the first mounting hole according to template referenced on page 8. (Figure 2)



OR



- 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 #14 x 1-3/4" self-drilling, self-tapping screws.
3. Place backplate against the frame so that the first hole in the backplate is aligned with the first mounting hole in the frame. Attach backplate with provided screw. **Do not fully tighten screw at this time.**
 4. Ensure backplate is aligned parallel with the door frame. Using the backplate as guide, mark and drill second mounting hole. (Figure 3)
 5. Insert second screw and tighten both screws.
 6. Using the backplate as a guide, drill and tap remaining five (5) holes in frame. (Figure 3)
 7. Secure with additional five (5) screws and securely tighten all screws.
 8. **For concealed wiring:** Using the backplate as a guide, mark and pre-drill two (2) conduit holes with the 3/16" drill. Then use the Ø7/8" hole saw or equivalent to drill two (2) conduit holes.

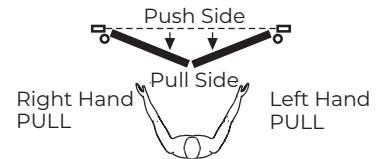


Figure 1

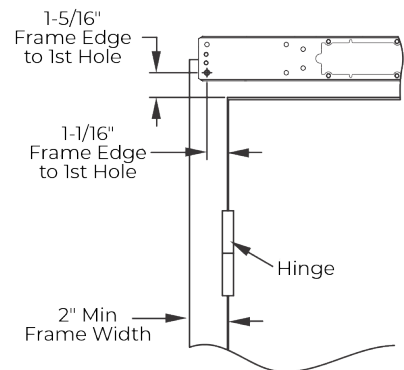


Figure 2 Right Hand Shown

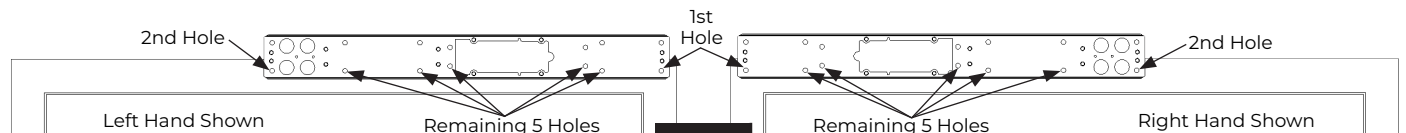


Figure 3

B. Mount the track.

- Using the template on page 8, measure and mark the track mounting holes using the template. (Figure 4)



- Drill the first mounting hole.
 - For metal reinforced doors, drill and tap the holes with #16 drill and #12-24 tap to use the #12-24 x 1-3/4" screw.
 - For wood doors, use a 3/32" drill and #12-24 x 1-3/4" screw with sleeve nut.
 - For sleeve nuts, see illustration. (Figure 5)

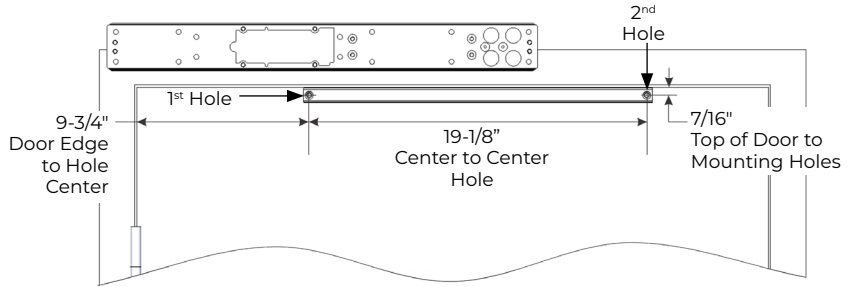
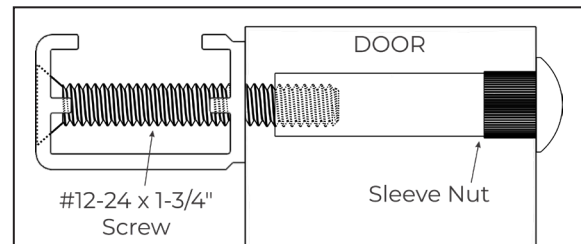


Figure 4

OR



- Prepare the track for mounting:
 - Remove the end cap screws and end caps from track.
 - Slide off the track cover and slider piece.
 - Replace the slider piece back into the track.
 - Place the end caps back onto the track.
- Attach the track with proper hardware to the first mounting hole. **Do not fully tighten.**
- Install the track parallel with the top of the door. Using the track as a guide, mark the second track mounting hole.



Sleeve Nuts and Bolts	Hollow Metal & Aluminum	9/32" (7mm) thru; 3/8" (9.5mm) door face opposite to closer
	Wood	3/8" (9.5mm) through

NOTE: Sleeve nut used for doors 1-3/4" or greater. For doors less than 1-3/4", sleeve nut body will need to be shortened.

Figure 5

- Drill the second track mounting hole. (Refer to Step 2 above).
- Secure the track with proper hardware to the second mounting hole and tighten both mounting screws.
- Snap the track cover back onto the track.

NOTES:

- Slider assembly and end caps must be on the track before attaching the track to the door. (Figure 6)
- Slider must slide freely in the track.

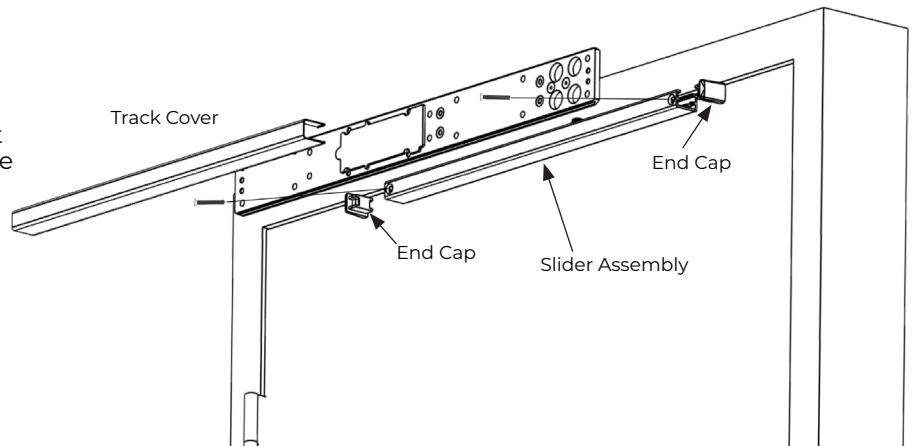
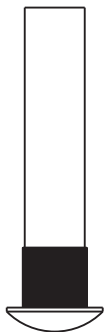
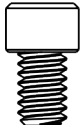


Figure 6

C. Install the end caps.



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

NOTE: The end cap with 3-position switch is always located on the conduit hole side of backplate.

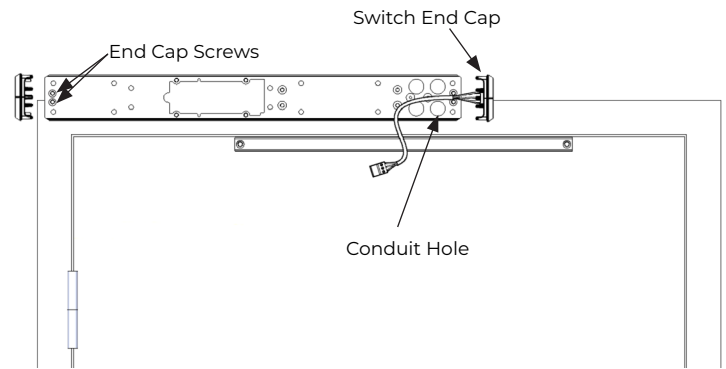


Figure 7

D. Install operator body assembly.

1. Using four (4) screws provided, install the operator body to the backplate. (Figure 8)

NOTES:

- Tighten screws in a cross pattern until all four (4) screws are tight. (Figure 8)
- The operator body is properly oriented for PULL SIDE application when:
 - The motor is toward the hinge
 - "This side out PULL SIDE" label is facing away from the backplate. (Figure 8)

2. Using the supplied cable management clip, secure the cables along operator body. (Figure 9)

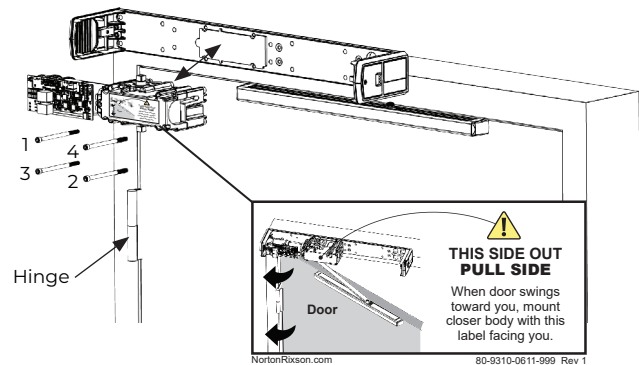
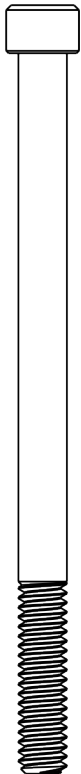


Figure 8 Right Hand Shown

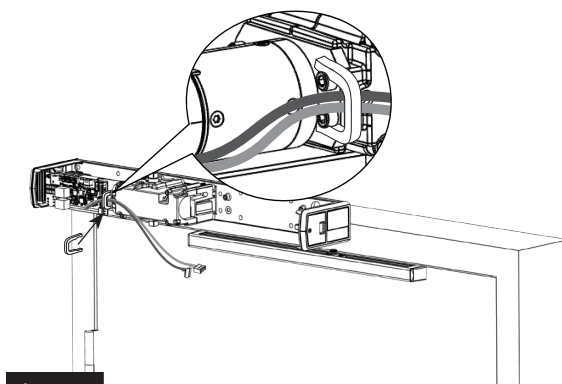
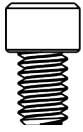


Figure 9

E. Install the power supply assembly.

1. Insert two (2) 1/4-20 x 3/8" screws as shown, leaving an approximate 3/16" gap between head of the screws and backplate. (Figure 10)
2. Slide the power supply key holes over screws allowing narrow slots of key holes to rest on screws. (Figure 10)



NOTE: To properly orientate the power supply:

- The narrow slots of the key holes are at the top.
- The control board is always faces down.
- The power supply harness faces the switch end cap.

3. Tighten both screws.

4. **Optional:** AC conduit bracket assembly installation.

- Place the mounting side of the bracket against the backplate with the AC plug and conduit hole facing up toward the frame header. (Figure 11)



- Secure the bracket to the backplate using two (2) #8-32 x 1/4" machine screws.

- Plug the AC Power bracket's harness into the power supply harness. (Figure 12)

5. Connect the motor cable and ribbon cable from the operator body to the control board. (Figure 13)

- To connect the ribbon cable, spread the tabs on the control board connector before inserting.

6. Connect the 3-position switch to the control board. (Figure 13)

7. Connect the operator's monitor board to the power supply by plugging the Monitor Board Power cable (male) into the pre-wired Power Supply cable (female). (Figure 13 and Figure 14)

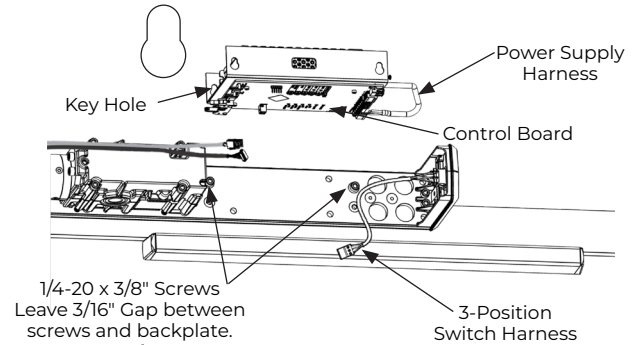


Figure 10

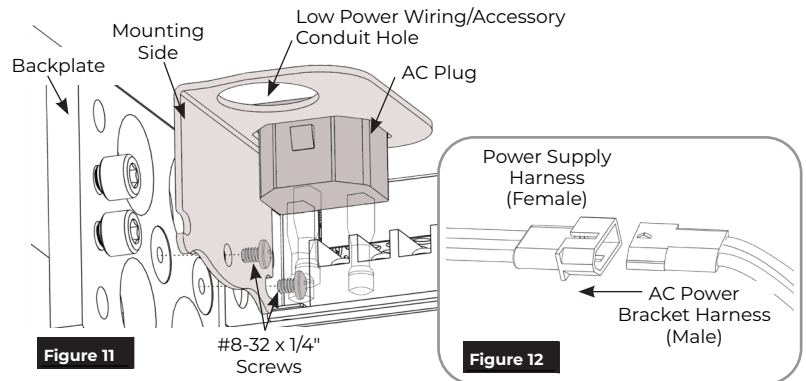


Figure 11

Figure 12

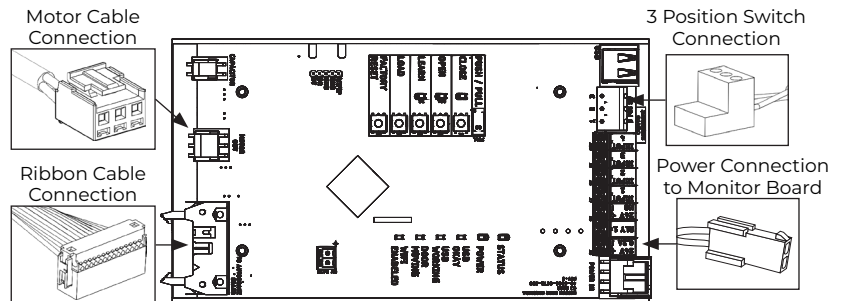


Figure 13

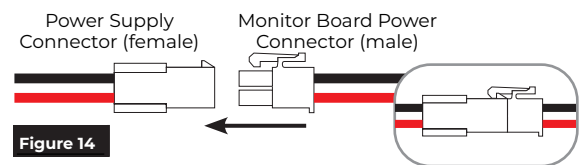


Figure 14

F. Set pinion to starting position.

1. Locate the dowel pin on the side of the operator housing (adjacent to the pinion square). (Figure 15)
2. Place the Pull arm on the pinion square and rotate it counterclockwise until the pinion comes to a hard stop.

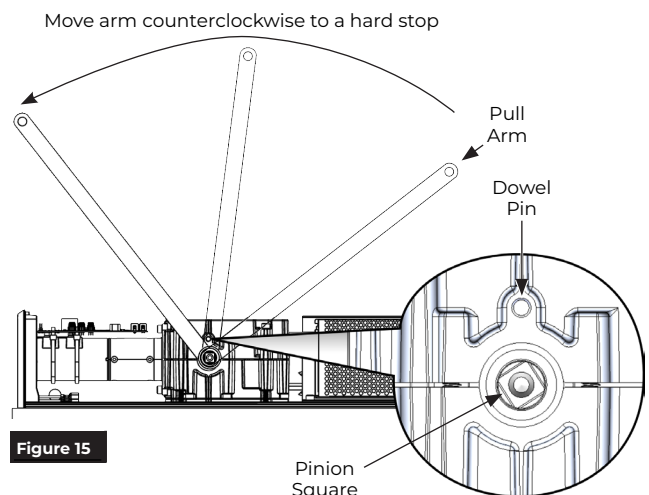
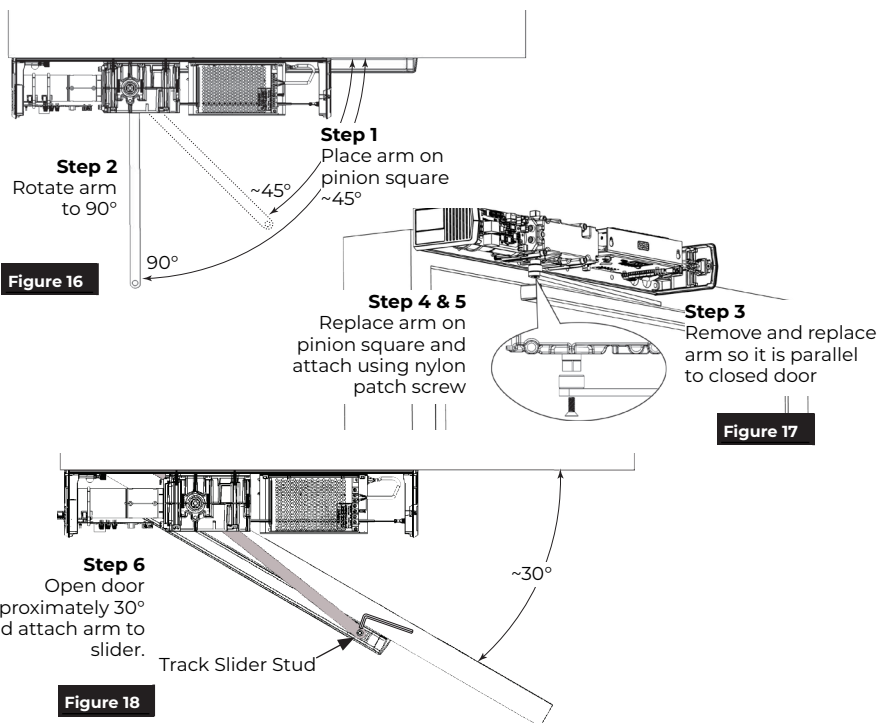
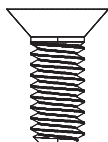


Figure 15

F. Install the arm.

1. Place the arm onto the pinion square at approximately 45° from the door.
2. Rotate the pull arm away from the door until the arm is perpendicular (or 90°) to the door. (Figure 16)
3. Remove the arm from the pinion and reorient the arm to be parallel to the closed door.
4. Replace the arm on the pinion square.
5. Attach the arm to the pinion square using the 1/4-20 x 3/4" nylon patch screw. (Figure 17)
6. Open the door approximately 30° and attach the arm to the slider in the track. Use the hex wrench to tighten slider stud counter clockwise until slide is tight in the arm. (Figure 18)
7. Close the door.



Installation of the **5211 PULL SIDE Low Energy Operator** is now complete.

Continue with the separate Programming Manual 80-9352-0022-020 to set up and adjust operator. Once programming and adjustments have been completed, attach cover and label plates, as shown below.

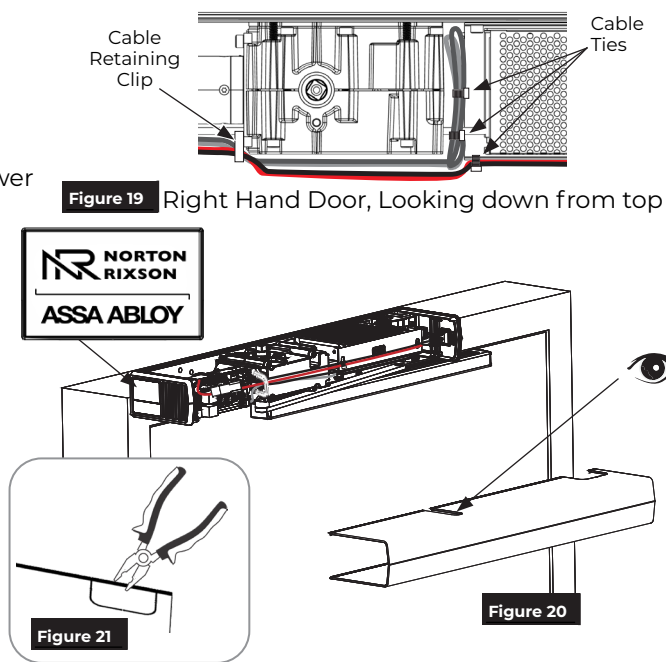
G. Attach the cover and end cap label plates.

NOTE: Attach the cover after initial programming has been completed.

1. To prevent wire crimping, use the cable ties provided to neatly store excess wiring as shown. The power cabling to the Monitor board should be cable tied in front of the power supply. (Figure 19)
2. Align the cut-outs in the cover to pinion shafts. (Figure 20)
3. **Optional:** If the AC Bracket is installed, use pliers to remove the appropriate knockout located at the top of the cover (Figure 21)
4. Slide the cover onto the unit using end caps as guides.
5. Snap the cover securely to back plate.
6. Attach a label plate to each end cap by snapping into place by hand with gentle pressure. (Figure 20)



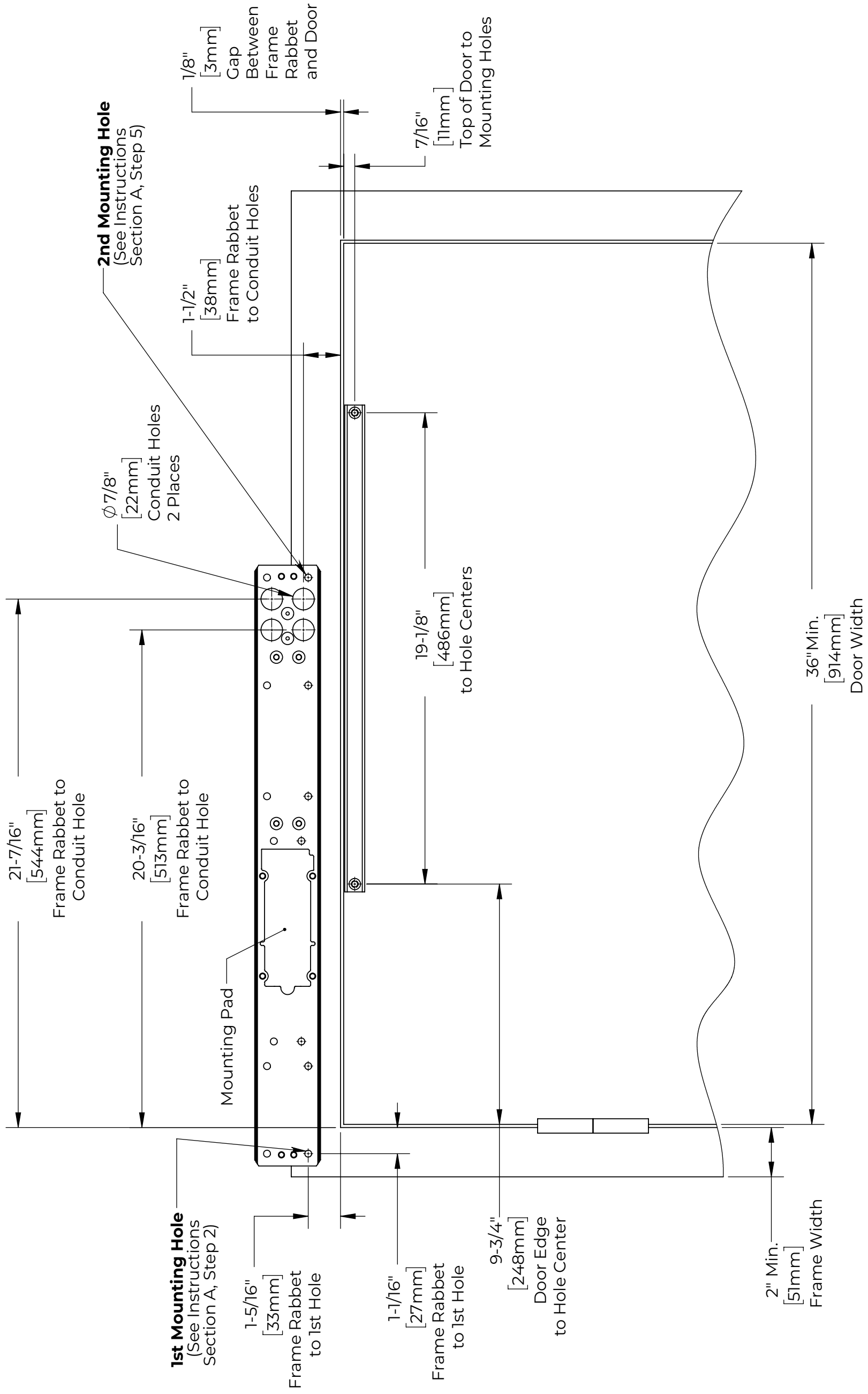
WARNING: Make sure no wiring is loose or can be caught by cover before snapping it into place.



5200 Series Template

Pull Side Application ONLY

Right Hand Door Shown



- NOTES:**
- Seven (7) mounting holes and optional two (2) conduit holes are to be drilled as shown with center marks. ⊕
 - Dimensions are given in inches (") and millimeters [mm]