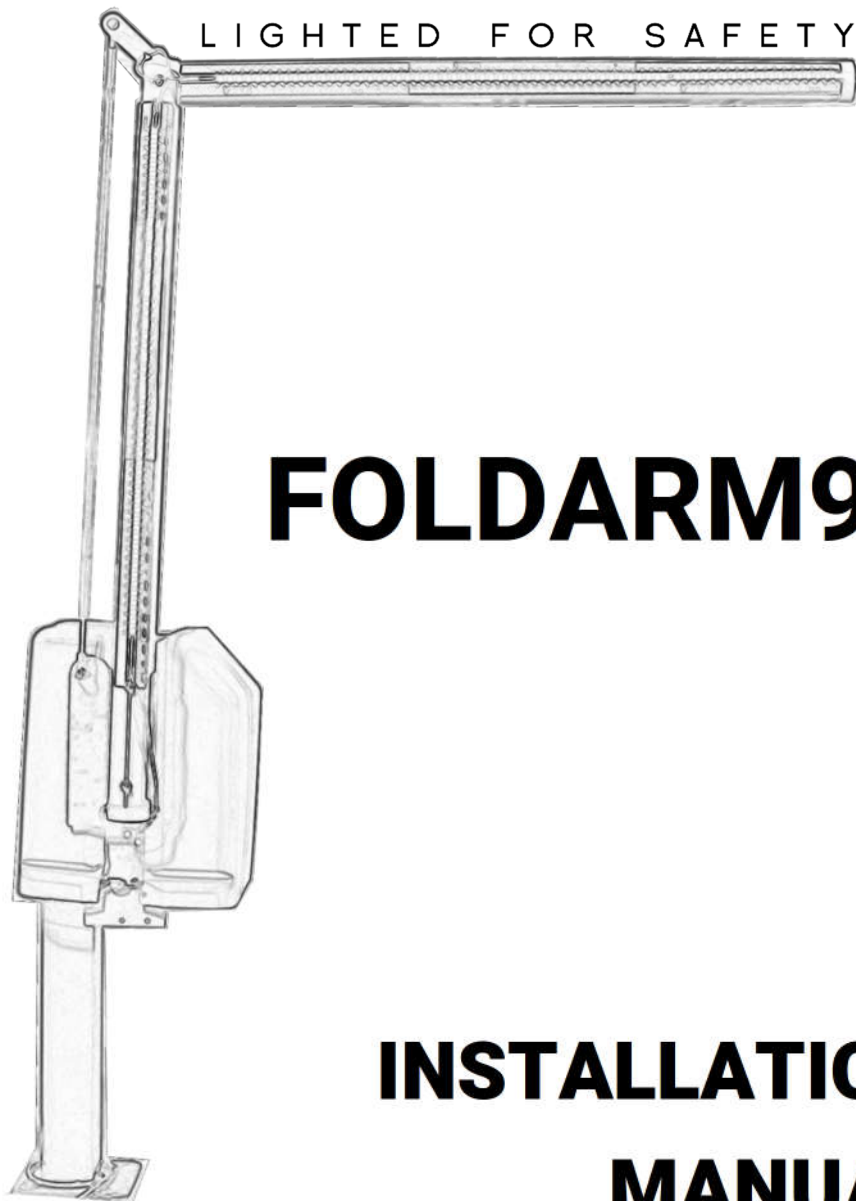




LIGHTED FOR SAFETY



FOLDARM90

**INSTALLATION
MANUAL**

IMPORTANT SAFETY INFORMATION



IMPORTANT

Please read all instructions and safety information prior to attempting installation.

Always disconnect 110V and 12V power from gate operator equipment prior to touching any wiring or installing anything. Serious injury could occur if power is not disconnected prior to installation.

BE HIGHLY CAUTIOUS OF OVERHEAD POWER LINES!

Ask for assistance from another person to install gate arms. Removal and replacement of the gate arm pole is much simpler with two people.

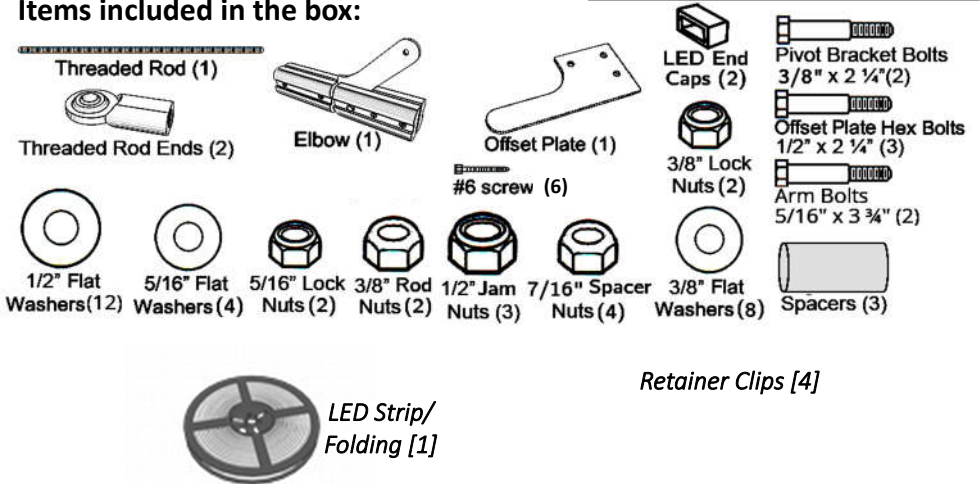
Always use appropriate PPE during installation including safety glasses, gloves and hearing protection as needed.

Install as directed. GateArms+ LED Barrier Arms and LED Controllers are intended for use as described herein and by the product literature available for download at www.GateArms.com

Any misuse, alteration, or modification of GateArms+ branded products beyond what is described in the available product literature will void all warranties.

1. UNBOX-GET ORGANIZED

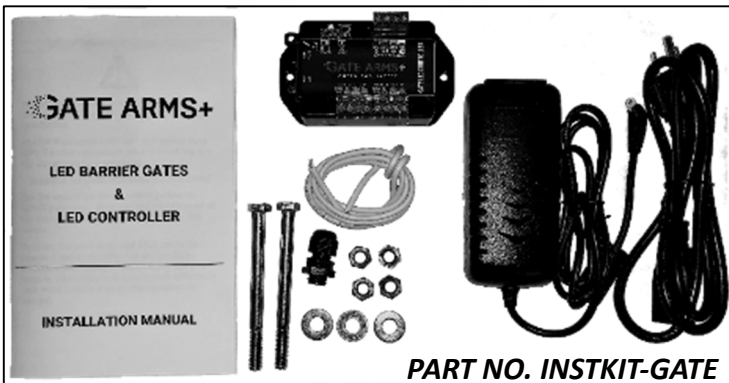
Items included in the box:



Tools Needed (not included):

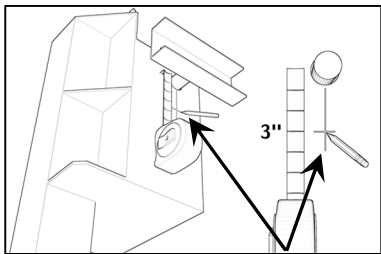
- Power Drill
- Center Punch
- Socket Set
- 100% Silicone Glue
- Drill Bit 1/2
- Hammer
- Wrenches
- Rubber Bands
- Drill Bit 3/8
- Level
- Acetone
- Pencil / Sharpie
- Drill Bit 1/8

NOTE: First time installations will require one {INSTKIT-GATE} with LED Controller, (sold separately).



See our complete line of LED Safety Light Systems at www.GateArms.com

2. **INSTALL OFFSET PLATE TO OPERATOR HOUSING**



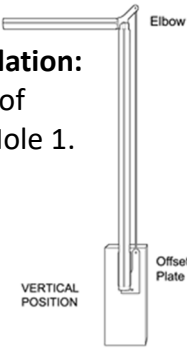
2.1 Measure 3" down from center of motor shaft. Mark measurement for Hole 1 (mandatory).

RIGHT SIDE INSTALLATION

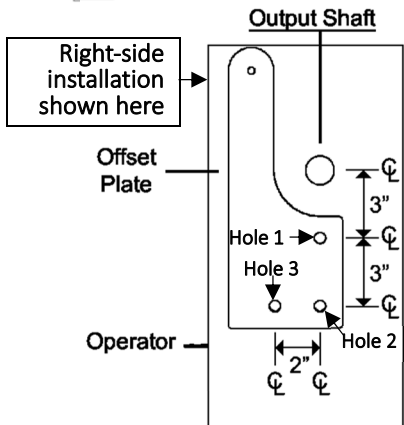


For right-side installation:
Align top right hole of Offset Plate with Hole 1

LEFT SIDE INSTALLATION

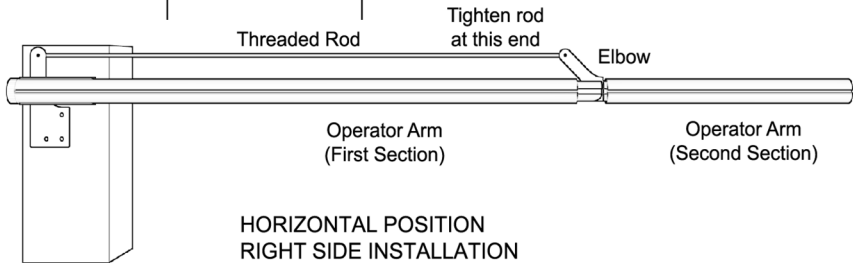


For left-side installation:
Align top left hole of Offset Plate with Hole 1.

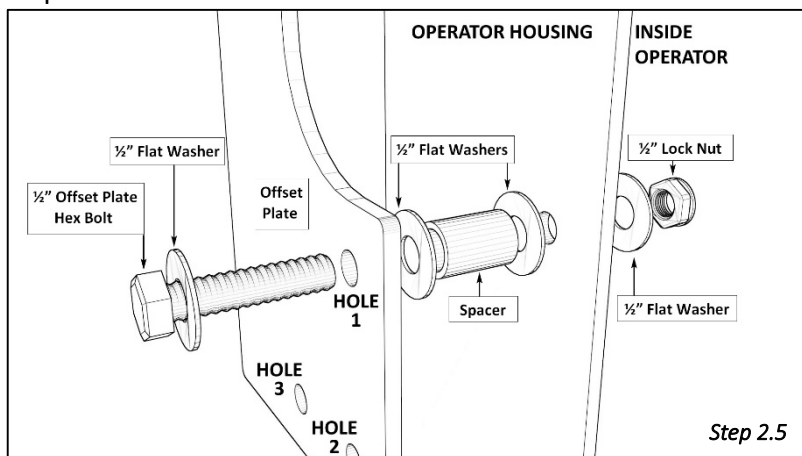


2.2 Measure 3" down from the center of Hole 1 and mark the measurement for Hole 2.

2.3 Measure 2" left of the center of Hole 2 and mark the location for Hole 3 (optional, may not be necessary unless using a very long gate arm.)



- 2.4 Drill $\frac{1}{2}$ " holes into the operator on marked locations, being careful not to damage anything on the inside of the operator.
- 2.5 Starting at Hole 1, attach the Offset Plate to the operator as shown below with hardware included in kit. Tighten securely. Repeat for Hole 2 and Hole 3.



- 2.6 Determine the operator arm's clearance. Measure the height from the top of the operator's output shaft to the lowest spot of the ceiling above the barrier arm. This is your "Clearance Height".

3. ASSEMBLE BARRIER ARM

3.1 Cut the operator arm to desired length as follows:

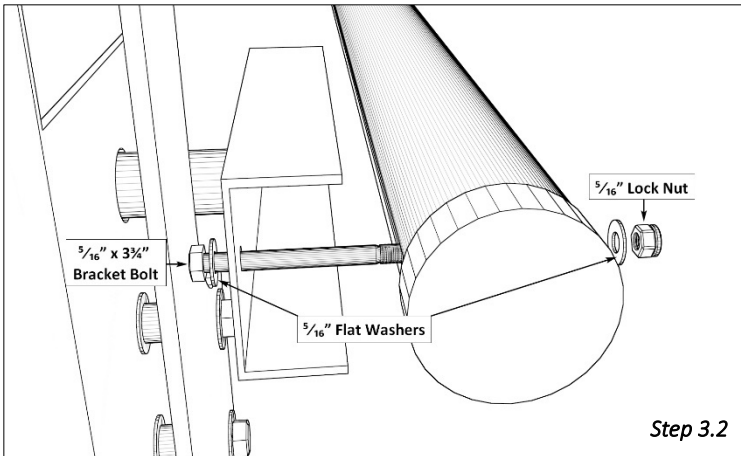
1st Section Length = Ceiling Height – 7" (elbow) + 7" (bracket)

- Ensure 1st section contains the mounting bolt holes.
- Select the LED based on desired length of 1st arm section

2nd Section Length = 6' (unless necessary to cut it)

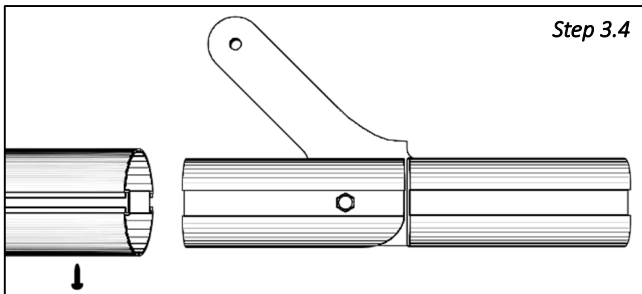
3.2 Attach 1st arm section to the operator's arm bracket as shown below. Tighten securely and repeat with second bracket bolt.

NOTE: Do not use nylon nuts on folding arms due to vibration concerns.

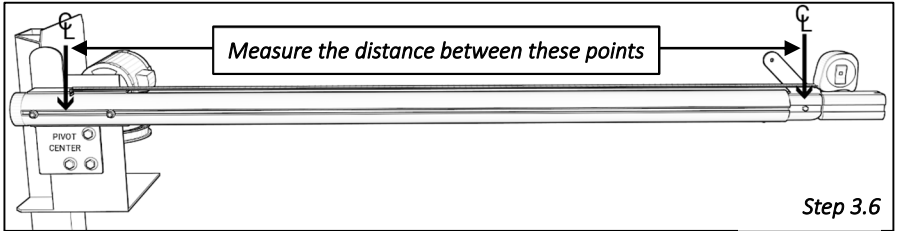


3.3 Close the gate so the arm is horizontal.

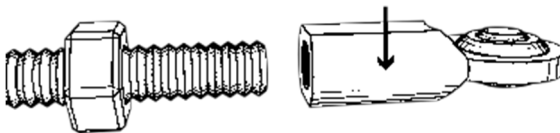
3.4 Insert the Pivot Bracket into the 1st section of the arm with the Pivot Bracket's metal arm facing up and towards the operator.



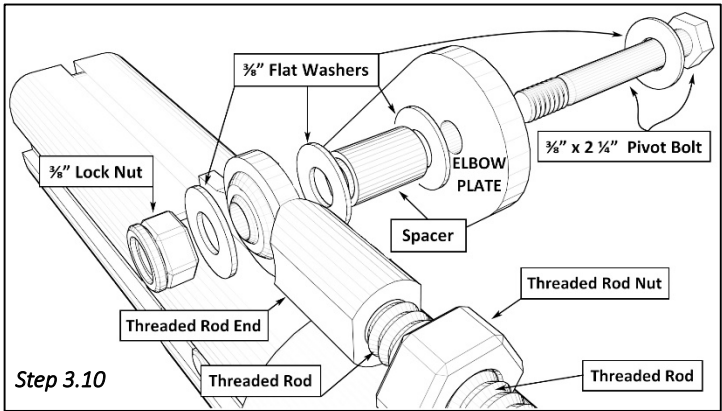
- 3.5 Drill $\frac{1}{8}$ " hole on underside of arm and attach to the Pivot Bracket with #6 screw.
- 3.6 Measure the distance from the center of the operator's output shaft to the center of the Pivot Bracket's hinge joint as shown below. This measure is the "Arm Height".



- 3.7 If necessary, cut the Threaded Rod to the "Arm Height" length minus 2". **NOTE:** Prior to making any cuts, pre-install a $\frac{3}{8}$ " nut on the rod to be used as a tool to clean the burrs and smooth out the cut.
- 3.8 Install the $\frac{3}{8}$ " rod nuts on both ends of the Threaded Rod (if not already done).
- 3.9 Screw a Threaded Rod End onto each side of the Threaded Rod until the Threaded Rod is about half-way through the Threaded Rod End.

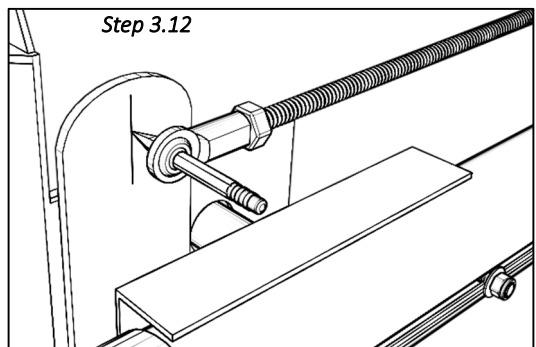


3.10 Assemble the Threaded Rod to the Elbow as shown in the illustration below. Tighten both nuts securely.

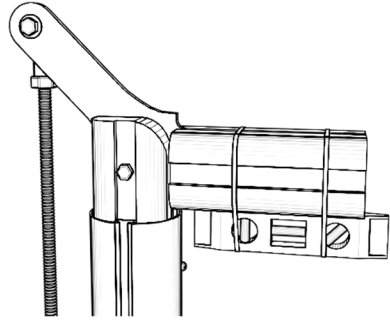


3.11 If necessary, adjust the operator's bracket position until the 1st segment of the arm is level. Using a level tool, ensure the folding part of the elbow is level when in the fully-locked horizontal position. Have a helper hold the elbow in the horizontal position desired.

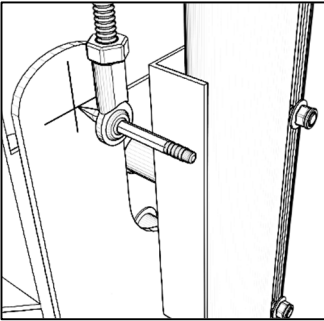
3.12 On the back side of the Threaded Rod, take a pencil or sharpie and put it through the eye of the threaded rod end facing the offset plate. It may help to wrap the pencil with some electrical tape to ensure that it sits centered within the Threaded Rod End eye. With the elbow in the fully-locked horizontal position and while keeping the arm level, carefully mark a line going up and down onto the offset plate. Keep the pencil perpendicular to the arm and as centered as possible within the Threaded Rod End eye.



- 3.13 Set the barrier arm in the fully-open vertical position. Have your helper use a level tool to ensure the folding part of the elbow is level (horizontally) and stays level during the next step.



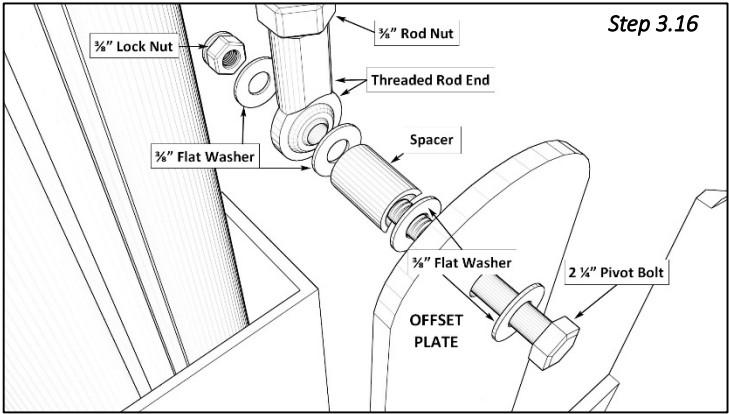
- 3.14 Insert a pencil or sharpie through the eye of the threaded rod end facing the offset plate. While your partner keeps the folding part of the elbow level horizontally, carefully mark a line going left and right onto the offset plate. Keep the pencil perpendicular to the arm and as centered as possible within the Threaded Rod End eye.



- 3.15 Drill a $\frac{3}{8}$ " inch hole through the center of the marked cross on the offset plate. Do not remove the offset plate or make any more adjustments to the threaded rod as doing so may cause the folding arm to not be level during operation.

NOTE: This hole should be made with high precision. We recommend using a center punch tool about 2 times in the center of the marked cross. Then create a $\frac{1}{8}$ " pilot hole, a second $\frac{1}{4}$ " hole, and a final $\frac{3}{8}$ " hole.

- 3.16 Assemble the remaining Threaded Rod End to the Offset Plate as shown in the illustration below. Attach the threaded rod nut to the top of the threaded rod end and tighten all securely.



- 3.17 Insert 2nd section of the barrier arm into Pivot Bracket.
- 3.18 Drill $\frac{1}{8}$ " hole on underside of arm and attach to the Pivot Bracket with a #6 screw.
- 3.19 Ensure Arm is horizontal (90° to vertical) when Up and Down. If not, remove a bolt and tighten or loosen a Rod End to adjust the articulation process.

4. INSTALL LED STRIP(S)

- 4.1 Unreel the 1st segment of the LED strip all the way to the 10" elbow wire. Leave it loose for the moment.
- 4.2 Slide the 2nd segment of the LED strip (the part still on the reel AFTER the 10" elbow wire) into the 2nd arm section (start at the very outer end of the gate arm) with LED chips facing outwards. Use the gate arm's track on the side facing the drivers (unless double-sided).

NOTE: The 2nd section of the LED strip CAN be cut on the cut-lines.

- 4.3 Slide the 1st section of the LED strip (the part BEFORE the 10" elbow wire) into the 1st arm section (the side connected to operator bracket).

NOTE: this section of the LED strip CANNOT be cut since it has wire on both ends.

- 4.4 Connect the LED to the harness cable.
- 4.5 Put a dab of silicone glue near the bracket-end of the LED strip to prevent it from moving.
- 4.6 Test to ensure LEDs turn green and red correctly.
- 4.7 Proceed with LED Controller installation per the GateArms+ LED Barrier Arm and LED Controller Installation Manual. Available online our website at www.GateArms.com/technical-support.

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Patent Pending
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Manual Rev# 2020-05-FOLDARM90