

IQ Gate Systems: IQ-50-H Series Installation

IQ-50-H Series Capacities:

IQ-50-HS : Swing gates that are up to 12 feet long weighing up to 600 lbs.

**IQ-50-HL : Swing gates that are up to 16 feet long weighing up to 800 lbs.
or 12 feet long up to 1750 lbs.**

Important Safety Instructions

WARNING –

TO REDUCE THE RISK OF INJURY OR DEATH - READ AND FOLLOW ALL INSTRUCTIONS.

Never let children operate or play with gate controls. Keep the remote control away from children.

Always keep people and objects away from the gate. **NO ONE SHOULD CROSS THE PATH OF THE MOVING GATE.**

Test the gate operator monthly. The gate **MUST** reverse on contact with a rigid object or stop when an object activates the non-contact sensors. After adjusting the force or the limit of travel, retest the gate operator. Failure to adjust and retest the gate operator properly can increase the risk of injury or death.

Use the emergency release only when the gate is not moving. Make sure that all power to the gate operator is off.

KEEP GATES PROPERLY MAINTAINED. Read the owner's manual. Have a qualified service person make repairs to gate hardware.

The entrance is for vehicles only. Pedestrians must use separate entrance.

SAVE THESE INSTRUCTIONS.

Warning: To reduce the risk of injury or death, please read the following:

1. Read, follow and understand all instructions
2. The automated gate is not for pedestrian use
3. Do not activate your gate operator unless it is in sight and you can determine that it will travel without interfering with any objects or persons. Always keep people and objects away from the gate and its area of travel
4. Keep all access devices such as key switches, push buttons, and telephone entry systems away from the gate. The recommended distance is a minimum of 10 feet.
5. **Make sure that all warning signs have been attached and that the operator has been installed correctly**
6. If edges and photoelectric sensors have been installed, they should be tested for proper operation.
7. Keep gates properly maintained. Grease and lubricate all hinges and brackets to prevent binding and unnecessary friction.
8. Have the operator tested and serviced by a qualified and experienced technician. The gate should respond and reverse to all obstructions both inherently and externally
9. Disconnect the operator only when it is not in motion
10. **DO NOT** turn on the automatic close timer unless the gate is equipped with at least one non-contact external obstruction sensor, e.g., a photo electric beam, a vehicle loop, etc.

RESIDENTIAL VEHICULAR GATE OPERATOR

CLASS I – A vehicular gate operator (or system) intended for use in a home of one-to four single family dwelling, or a garage or parking area associated therewith.

COMMERCIAL/GENERAL ACCESS VEHICULAR GATE OPERATOR

CLASS II – A vehicular gate operator (or system) intended for use in a commercial location or building such as a multi-family housing unit (five or more single family units), hotel, garages, retail store, or other building servicing the general public.

INDUSTRIAL/LIMITED ACCESS VEHICULAR GATE OPERATOR

CLASS III – A vehicular gate operator (or system) intended for use in an industrial location or building such as a factory or loading dock area or other locations not intended to service the general public.

RESTRICTED ACCESS VEHICULAR GATE OPERATOR

CLASS IV – A vehicular gate operator (or system) intended for use in a guarded industrial location or building such as an airport security area or other restricted access locations not servicing the general public, in which unauthorized access is prevented via supervision by security personnel.

The IQ-50-H Series gate operator is a residential/commercial post mount swing gate operator

1) Install the gate operator only when:

- The operator is appropriate for the construction of the gate (see the ASTM F2200 standard) and the usage UL Class of the gate,
- All openings of a horizontal slide gate are guarded or screened from the bottom of the gate to a minimum of 4 feet (1.22 m) above the ground to prevent a 2-1/4 inch (57.2 mm) diameter sphere from passing through the openings anywhere in the gate, and in that portion of the adjacent fence that the gate covers in the open position,
- Guarding is supplied for exposed rollers.
- All exposed pinch points are eliminated or guarded

2) The operator is intended for installation only on gates used for vehicles. Pedestrians must be supplied with a separate access opening.

3) The gate must be installed in a location so that enough clearance is supplied between the gate and adjacent structures when opening and closing to reduce the risk of entrapment. Swinging gates shall not open "into" public access areas.

4) The gate must be properly installed and work freely in both directions prior to the installation of the gate operator. Do not increase the operator amperage levels beyond the required operable amounts to compensate for a damaged gate.

5) For gate operators utilizing Type D protection:

- The gate operator controls must be placed so that the user has full view of the gate area when the gate is moving,
- The placard be placed adjacent to the controls,
- An automatic closing device (such as a timer, loop sensor, or similar device) shall not be employed
- No other activation device shall be connected.

6) Controls must be far enough from the gate so that the user is prevented from coming in contact with the gate while operating the controls. Controls intended to be used to reset an operator after 2 sequential activations of the entrapment protection device or devices must be located in the line-of-sight of the gate. Outdoor or easily accessible controls shall have a security feature to prevent unauthorized use.

7) All warning signs and placards must be installed where visible in the area of the gate. A minimum of two placards shall be installed. A placard is to be installed in the area of each side of the gate and be visible to persons located on the side of the gate on which the placard is installed.

8) For gate operators utilizing a non-contact sensor such as a photo beam:

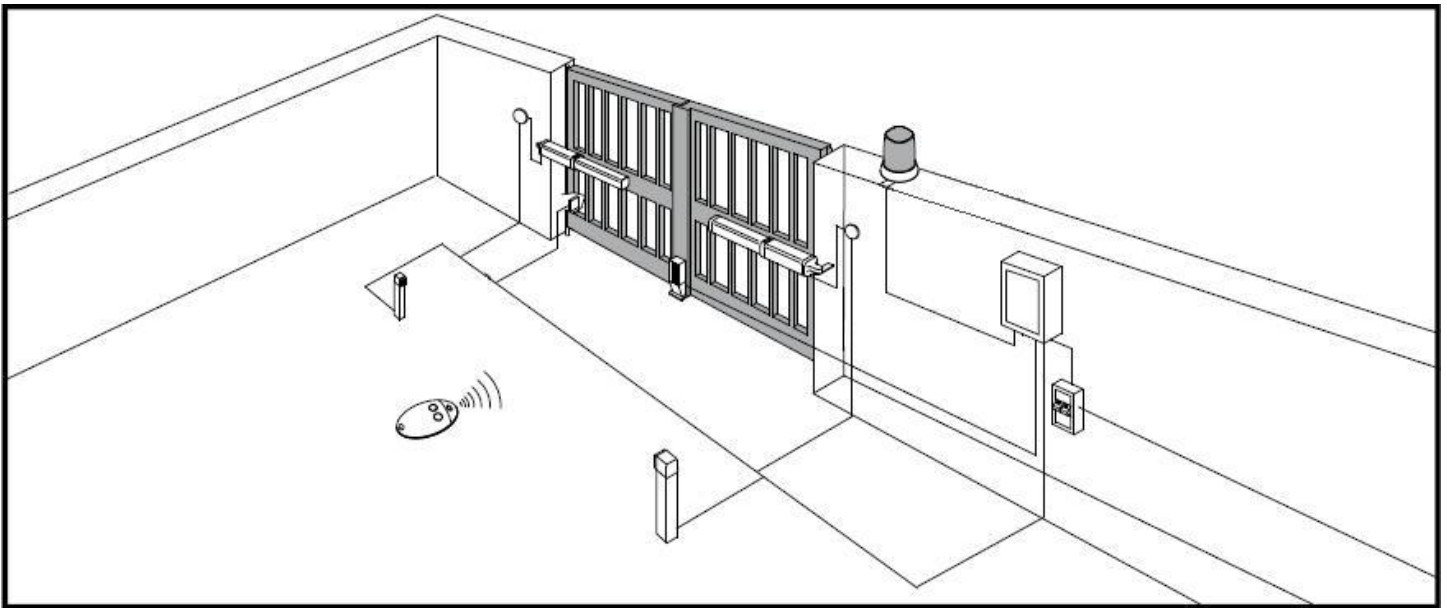
- See instructions on the placement of non-contact sensors for each type of application,
- Care shall be exercised to reduce the risk of nuisance tripping, such as when a vehicle, trips the sensor while the gate is still moving
- One or more non-contact sensors shall be located where the risk of entrapment or obstruction exists, such as the perimeter reachable by a moving gate or barrier.

9) For a gate operator utilizing a contact sensor such as an edge sensor:

- One or more contact sensors shall be located where the risk of entrapment or obstruction exists, such as at the leading edge, trailing edge, and post mounted both inside and outside of a vehicular horizontal slide gate.
- One or more contact sensors shall be located at the bottom edge of a vehicular vertical lift gate.
- One or more contact sensors shall be located at the pinch point of a vehicular vertical pivot gate.
- A hardwired contact sensor shall be located and its wiring arranged so that the communication between the sensor and the gate operator is not subjected to mechanical damage.
- A wireless contact sensor such as one that transmits radio frequency (RF) signals to the gate operator for entrapment protection functions shall be located where the transmission of the signals are not obstructed or impeded by building structures, natural landscaping or similar obstruction. A wireless contact sensor shall function under the intended end-use conditions.

Before installation:

- Read and follow all instructions
- Verify that the IQ Gate Systems operator that is being installed is the correct operator for the gate.
- Make sure that the gate has been properly installed and swings freely and level throughout its travel. Repair or replace any damaged or unsafe hardware. A gate that swings free of friction and binding will greatly increase the life of the gate operator.
- Review the operation of the system and the customers needs to make the installation as easy and efficient as possible.
- This gate operator is intended for vehicular gates only. A separate entrance must be provided for pedestrian use.



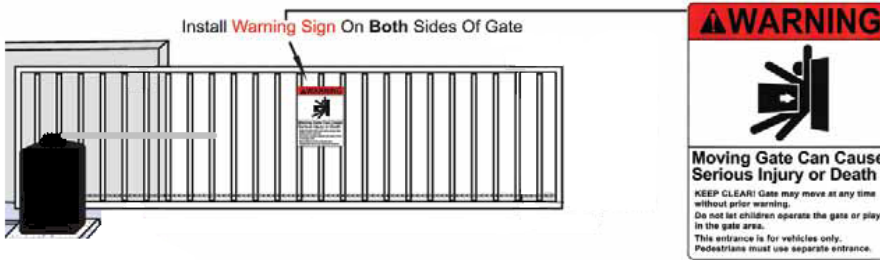
During installation:

- Install the gate operator on the secured side of the property and away from public access. A swing gate should not swing open "into" any public access areas
- Be mindful of moving parts and pinch points. Avoid close proximities.
- Installation of contact and non-contact sensors such as edges and photoelectric sensors is suggested to enhance the prevention of entrapment.
- Determine the best level of open and close force for the installation. An improper level will defeat the inherent current sensing purpose and make the installation unsafe. By utilizing the "Motor Diagnostic" feature, proper and accurate levels can be obtained when adjusting the open and close force settings. **Improper testing and setting of the force adjustment can increase the risk of serious injury or death.**
- Mount all access controls away from the gate a recommended minimum distance of 10 feet. The gate must be in full view of controls but out of reach.

After Installation:

- Review ALL safety instructions with the end user. Explain the basic operation and features including safety precautions of the entire gate operator system. Don't forget to include how to disconnect power to the operator and how to operate the gate manually.
- Attach all warning signs and placards as well as your own business contact information to the gates. It is recommended that you take a picture of the gates with the warning signs in place and record the date of the photo. Keep for your records.

Installing the Warning Sign

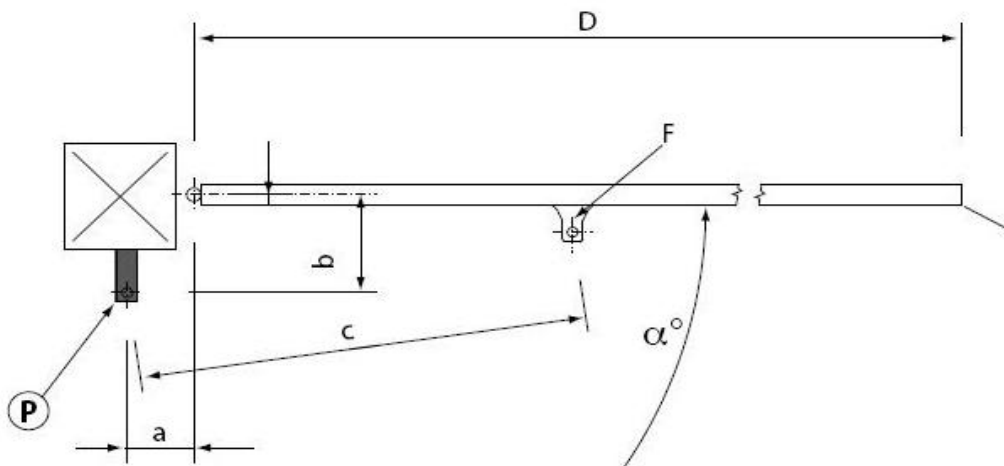


- SAVE ALL INSTRUCTIONS. Leave a copy of the manual and your contact information with the end user.

Preparing to install the IQ-50

Consider the following when installing an IQ-50:

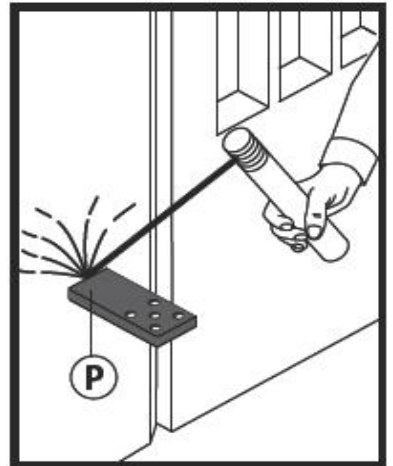
- Survey the desired location for the gate. Make sure that the opening is far enough away from a main road or heavy traffic. Be sure to allow enough distance away from the road so that a vehicle can approach the gate without obstructing traffic. Twenty-five feet from the road should be sufficient, but compliance with local codes should be observed.
- Keep power requirements in mind. The IQ-50-H Series is capable of operating with a supply of power from a solar panel that consists of at least 20 watts. AC power is recommended to consist of 110 to 220 volts. AC power is the preferred method of supply.
- Depending on soil conditions, set the gate post at least 2 ½ feet in the ground with an abundance of concrete. Check and conform to local codes.
- Install the gate with the incline of the road in mind. If the incline or slope of the road is an issue, a bi-parting gate might resolve this problem.
- Make sure to use sturdy enough steel posts and/or columns to accommodate the weight of the gate
- Determine the appropriate mounting height of the operator on the post to compliment a horizontal and sturdy attachment point on the gate



IQ-50-HL Series Measurements from Hinge point in INCHES

B--A	4.52	5.31	6.11	6.89	7.67	8.46	9.25	10.03	10.82
4.52				117	120	108	101	96	92
5.31				118	111	102	96	91	
6.11		103	108	115	104	96	91	87	
6.89		103	108	106	97	91	87		
7.67		101	106	97	90				
8.46		100	99	90					
9.25	95	101	90						
10.03	94	89							
10.82	88								

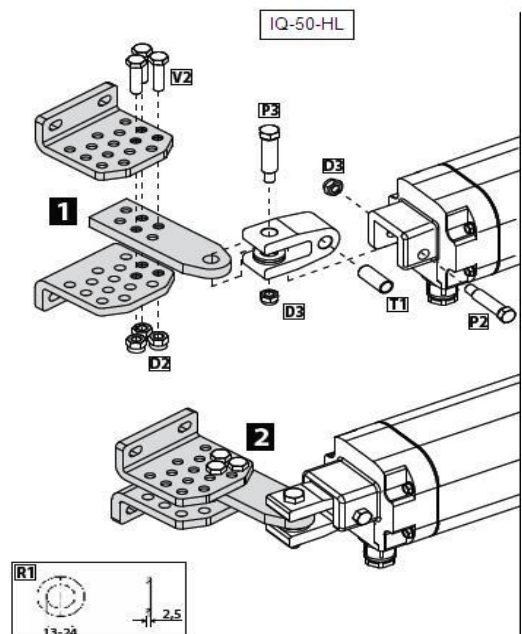
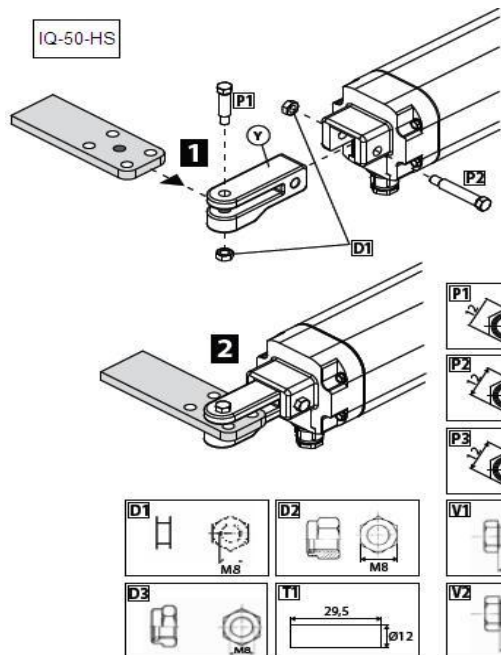
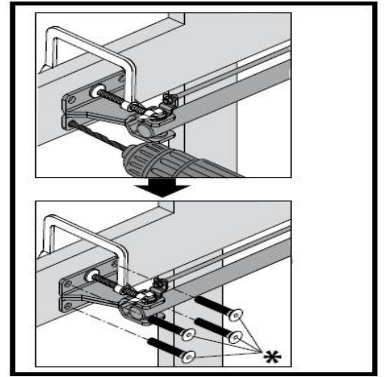
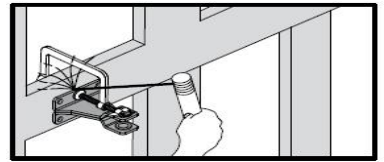
Deg.



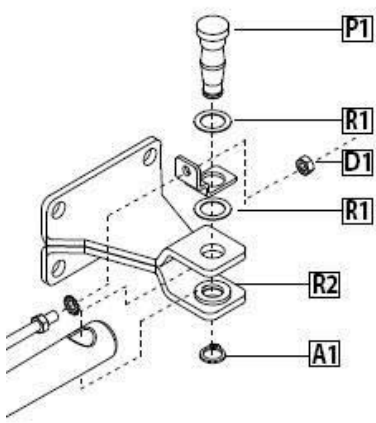
IQ-50-HS Series Measurements from Hinge point in INCHES

B--A	3.54	3.93	4.33	4.92	5.31	5.71	6.11	6.49	6.89
3.54					113	105	100	95	92
3.93					107	101	96	92	89
4.33				106	102	96	92	89	
4.92				100	95	90	87		
5.31			98	95	90				
5.71		94	96	90					
6.11		94	92						
6.49	90	93	87						
6.89	92	87							

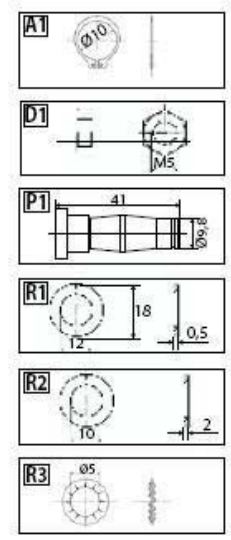
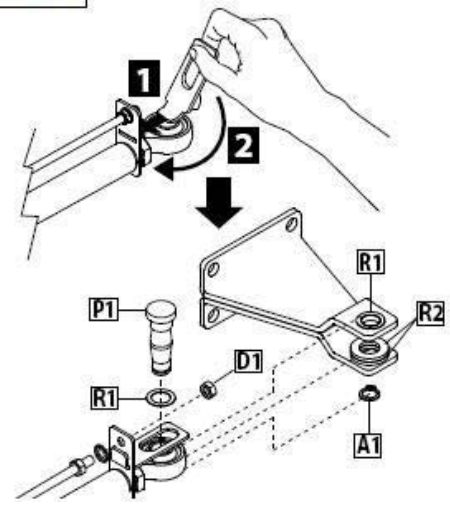
Deg.



IQ-50-HS



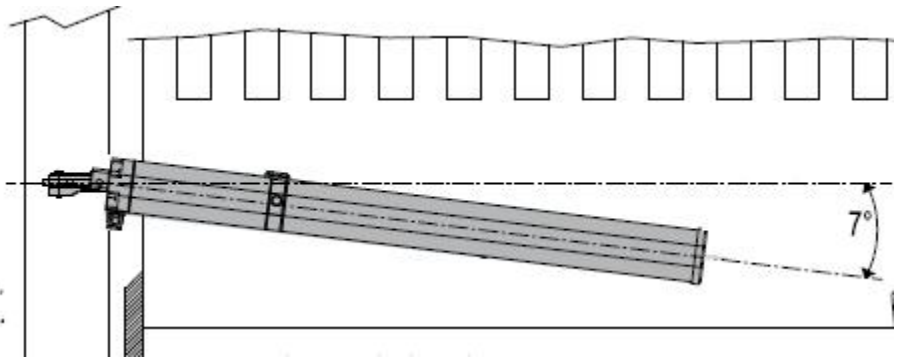
IQ-50-HL

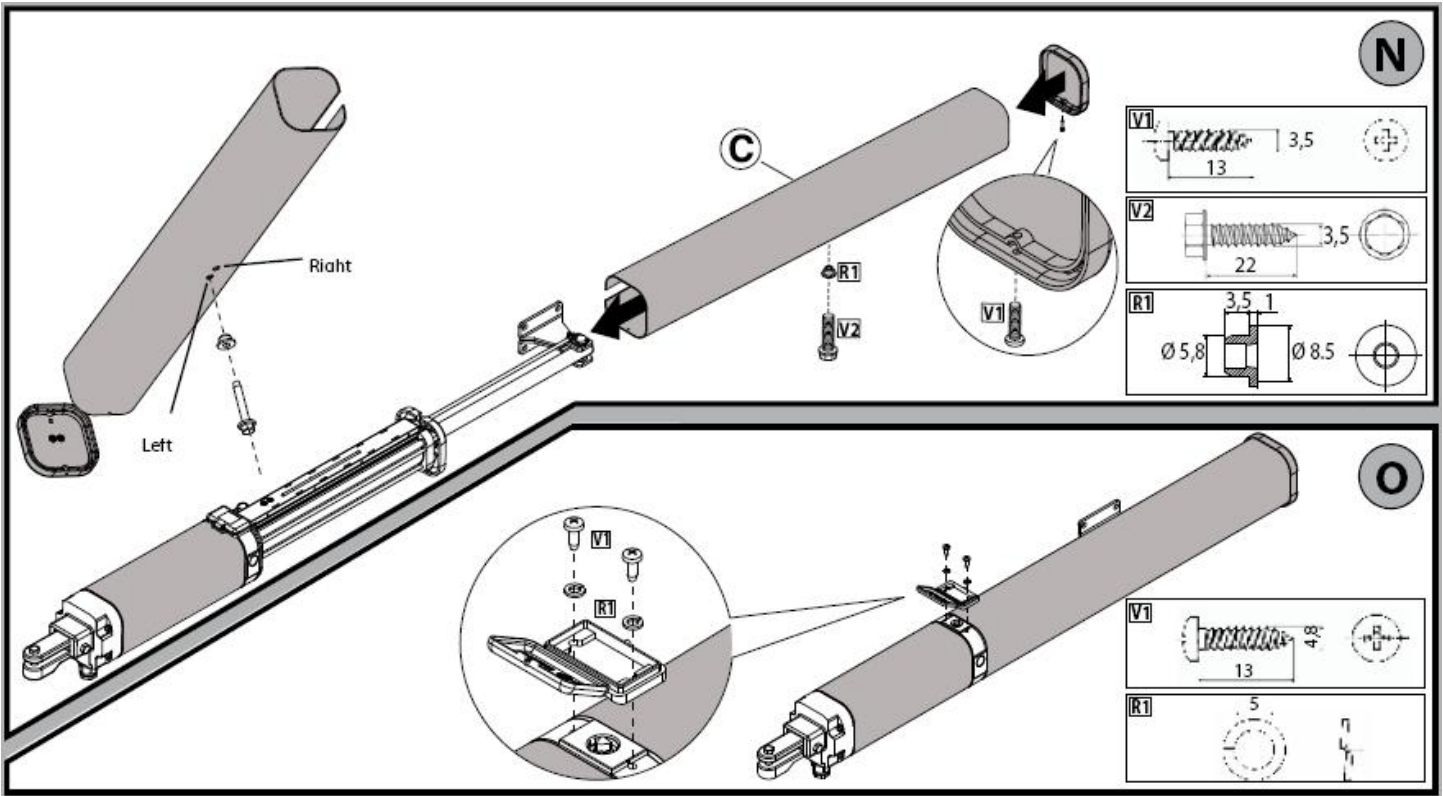


	L1	CU	L2
LUX BT 2B	30.71	10.63	43.81
LUX G BT 2B	35.55	15.43	53.22

Q

Maximum Allowable Tilt:





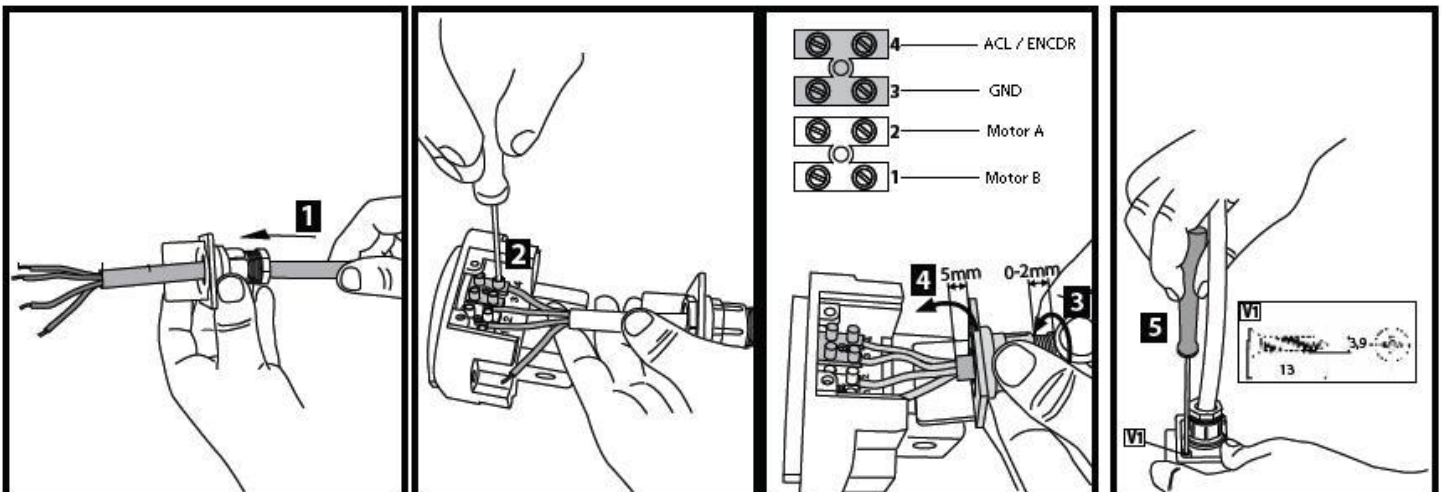
Required Wire Installation for the IQ-50-H Series Gate Operator

DO NOT EXCEED 50 FEET OF WIRE BETWEEN THE CONTROL BOARD AND THE OPERATORS

- A minimum of at least 4 wires is required for the IQ-50 to function with the greatest amount of accuracy. It is recommended that these wires be twisted and shielded in pairs. Among the 4 wires, 2 wires should be at least 16 gauge. The 16 gauge wires should be provided for the motor power. They will connect the wires from the motor to the MOTOR A and B terminals. If the gate operator retracts when opening, then the motor terminal #1 connects to MOTOR B and the motor terminal #2 connects to MOTOR A. It is recommended that the other 2 wires be 18 gauge or larger. These 2 wires will connect the IQ Gate Systems "Digitizer", which is the proprietary limit positioning system that is utilized in the IQ Control Board. From the motor, terminal #3 should connect to the GND terminal on the IQ Motor control board. Terminal #4 from the motor will connect to the ACL/ENCR terminal on the IQ Motor control board.

For Master / Slave Applications:

- Be sure to provide a 3/4" conduit or larger between the two gates if they will be set up as bi-parting. Utilize the same wiring requirements and practices when installing a "Slave" or Bi-Parting operator, as that observed with a single operator.



- Bolt the IQ-50-H Series operator onto the supplied mounting brackets. Open the gate to the desired full open position. Attach the operator front mounting bracket to the gate.
- Run the motor wires in a free and non-constricting way to allow the gate operator to move when the gate is opened and closed. Secure the wires in a junction box or the control box with a strain relief or other appropriate fitting.
- Tighten all necessary bolts and prepare the gate and operator for motion.
- Properly secure and attach the desired form of power in the control box where power termination is labeled. Attach the battery wires to the batteries after the AC power has been terminated and energized.

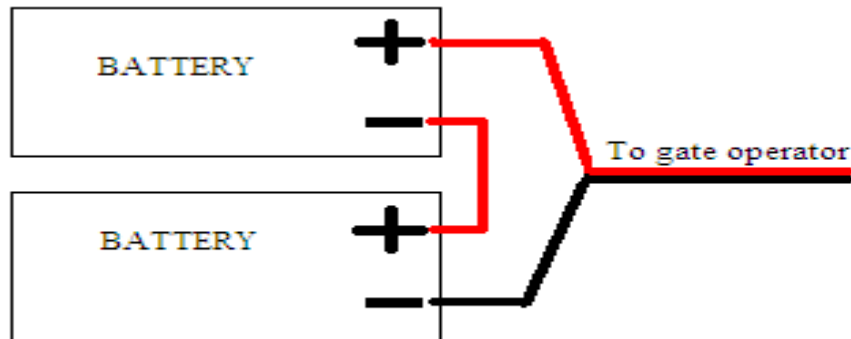
Connecting The Power



Be sure that the circuit breaker for the line input power is turned off before connecting the input power to the unit.

DO NOT REVERSE BATTERY POLARITY AT THE BATTERY OR THE CIRCUIT BOARD. SEVERE DAMAGE WILL OCCUR

The IQ-50-H Series operators are a 24 volt DC gate operator. Utilizing (2) 12 vdc batteries, the batteries must be connected in series, and then the positive (+) power wire (RED) is to be connected to the positive (+) battery terminal



When programming the IQ Control Board for a Master / Slave application, be sure to change the number of operators in the "Motor Drive Menu" to 2 operators. Also, make note of what operator is Motor 1 and what operator is Motor 2 when selecting the on board slide switch on the motor board labeled "M1 – M2".