

**LockMaster**<sup>TM</sup>

# Sliding Gate Operator User's Manual

Model: L110C

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### 1. Important safety information

Carefully read and follow all safety precaution and warnings before attempting to install and use this operator, incorrect installation can lead to severe injury.

- The gate operator should be installed by a qualified technician; otherwise, serious personal injury or property damage may occur.
- The automatic gate operator must be grounded.
- When opening or closing the gate, do not attempt to walk or drive through the gate.
- Children should not be allowed to play near or operate automatic gates.
- Install the gate operator on the inside of the property, DO NOT install it on the outside of the property where the public has access to it.
- Be careful when in close proximity to moving parts where hands or fingers could be pinched.
- The operator should be switched off before repairing it or opening its cover.

### 2. Main functions

The gate operator is used to drive the sliding gate, it is capable of overwork in short time. When overloading, it has electrical and mechanical double protections to ensure operating safety. In case of power failure, a release key allows to loosen the clutch to move the gate manually.

### 3. Technical parameters

Type	L110C	L110
Limit switch	Magnetic limit switch	Spring limit switch
Power supply	AC110, 60Hz	
Output torque (Max.)	15N • m	
Motor speed	1650rpm	
Reduction ratio	1:30	
Environmental temperature	-10°C to +55°C	

### 4. Packing list

After receiving the product, you should make an unpack-inspection, in which you should check whether the product was damaged. If you have any problem please contact dealer.

L110C gate operator packing list		
No.	Item	Quantity
1	Gate operator	1
2	Release key	2
3	Operator base (spare accessory)	1
4	Tighten bar	2
5	Magnet bracket	2
6	Sprocket cover	1
7	Screw for mounting driven sprocket bracket (M8X16)	4
8	Anchor bolt with nut	4
9	Driven sprocket bracket (left side & right side)	2
10	Magnet	2
11	Anchor	4

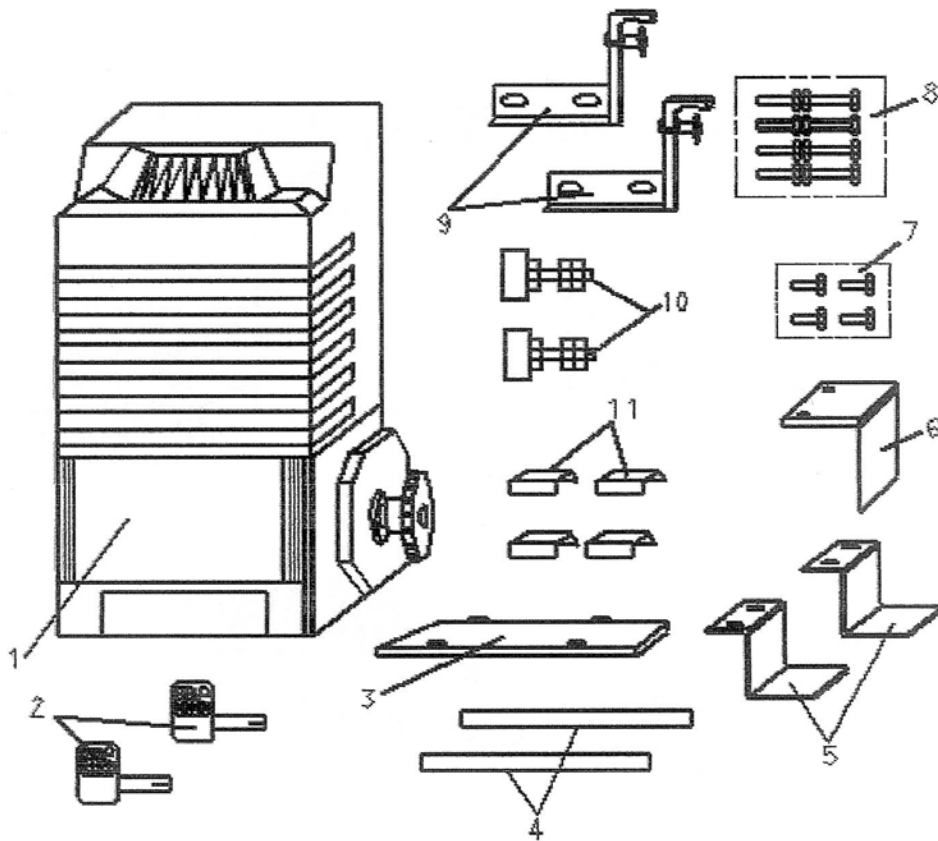


Fig.1 L110C accessories

L110 gate operator packing list		
No.	Item	Quantity
1	Gate operator	1
2	Release key	2
3	Operator base (spare accessory)	1
4	Tighten bar	2
5	Block bracket	2
6	Sprocket cover	1
7	Screw for mounting driven sprocket bracket (M8X16)	4
8	Anchor bolt with nut	4
9	Driven sprocket bracket (left side & right side)	2
10	Block	2
11	Anchor	4

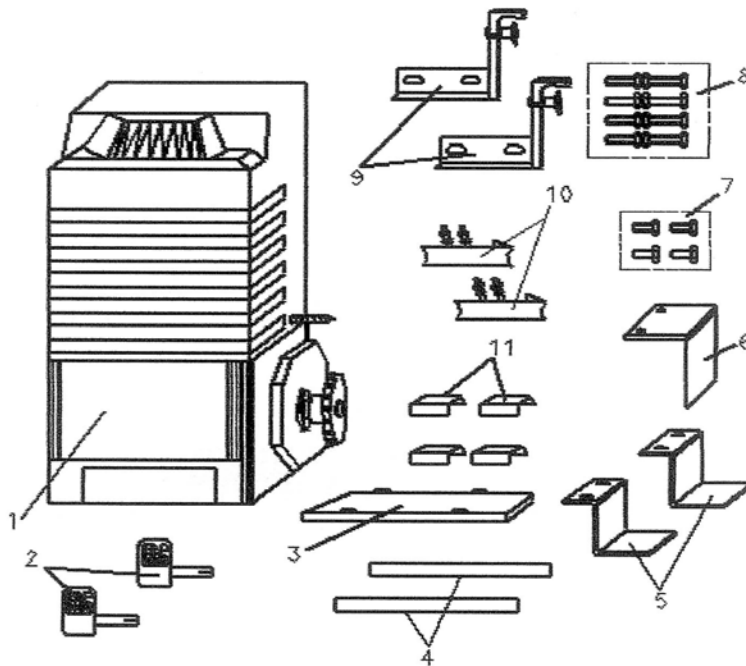


Fig.2 L110 accessories

**5. Installation**

The L110C/L110 Chain-driven Gate Operator operates by forcing a straight piece of chain. This length of chain is extended between two chain brackets located at opposite ends of the gate. The entire configuration is shown in the diagram below.

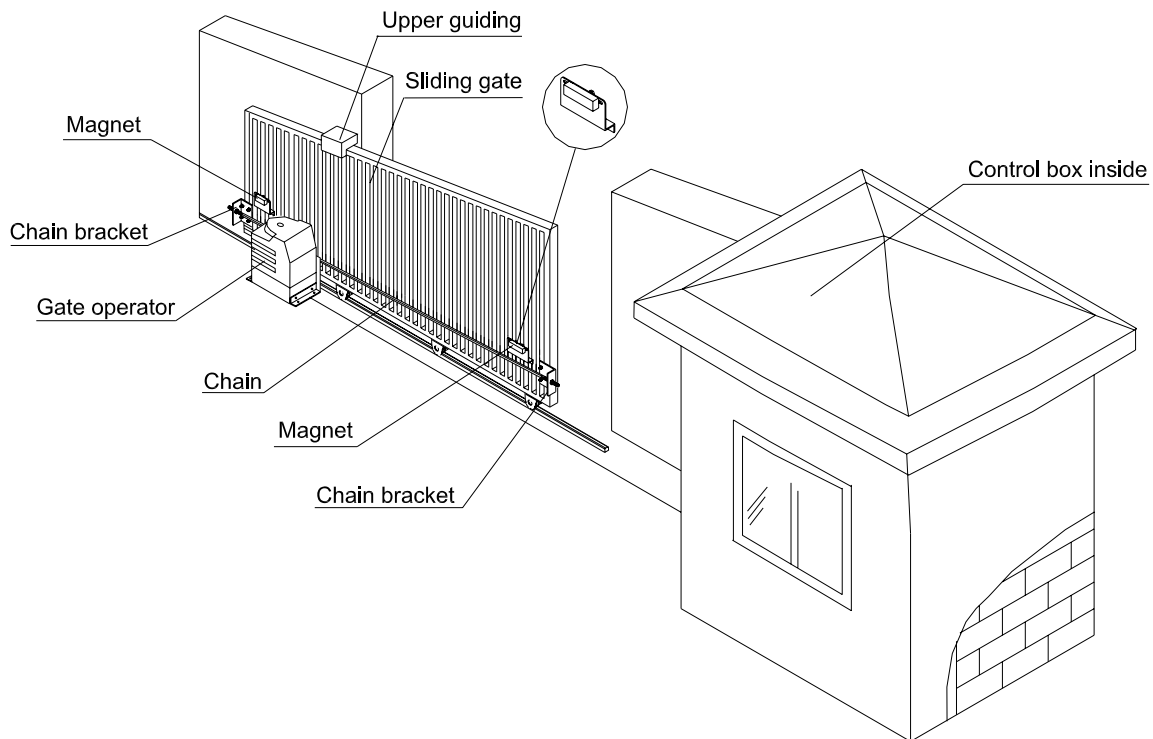


Fig.3 L110C

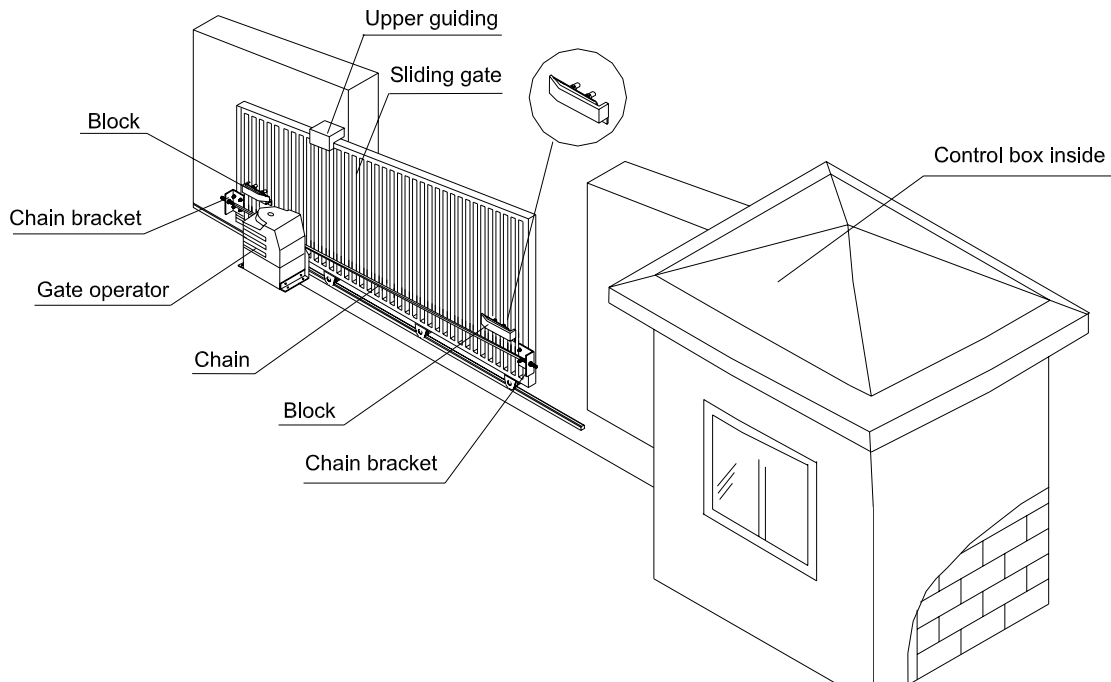


Fig.4 L110

Conduit

In order to protect the wires, conduit must be preset into the concrete when it is poured. Wires within the conduit shall be located or protected so that no damage can result from contact with any rough or sharp part.

Concrete pad

The base unit of the gate operator requires a concrete pad in order to maintain proper stability. The concrete pad should be approximately 300mm x 260mm x120mm deep in order to provide for adequate operation.

Anchors

You can use the anchor bolts, anchors, washers, and nuts. These anchors must be set into the concrete when it is poured, or you can use wedge anchors.

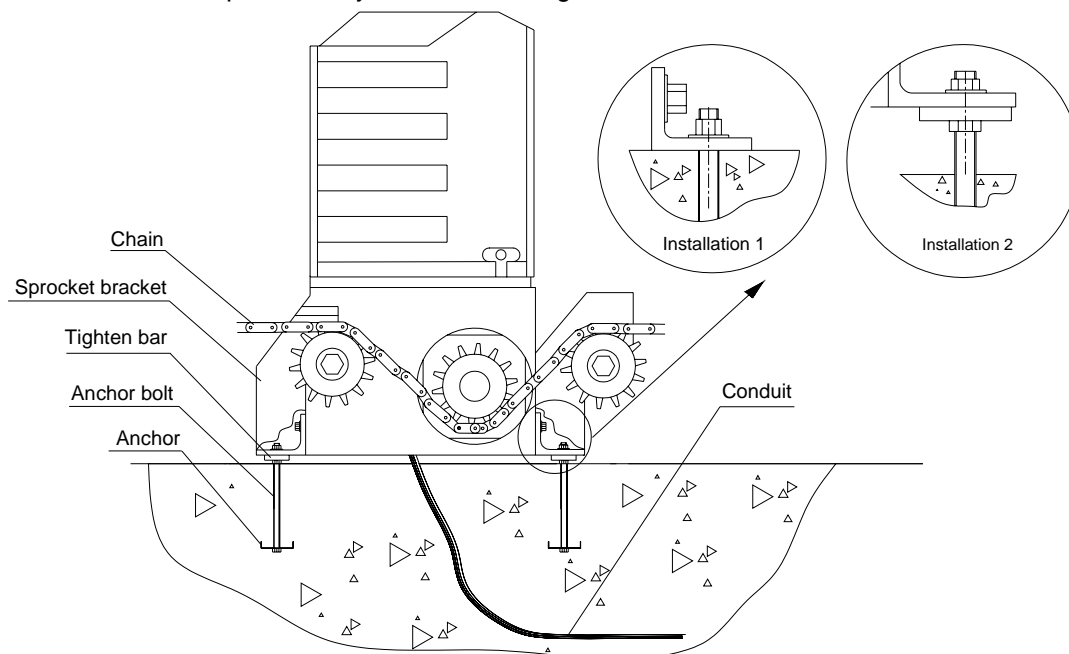


Fig.5

Driven sprocket bracket

Fix the driven sprocket bracket on both sides of the operator.

Operator

In locations where ground freeze is possible, mount the gate operator as shown in Fig.5 installation 1 or installation 2. Check the operator and make sure it is lined up with the gate.

Chain Brackets

Use the appropriate bolts to attach the chain bracket to the frame of the gate. If the gate is of square frame style, use the square bolts shown.

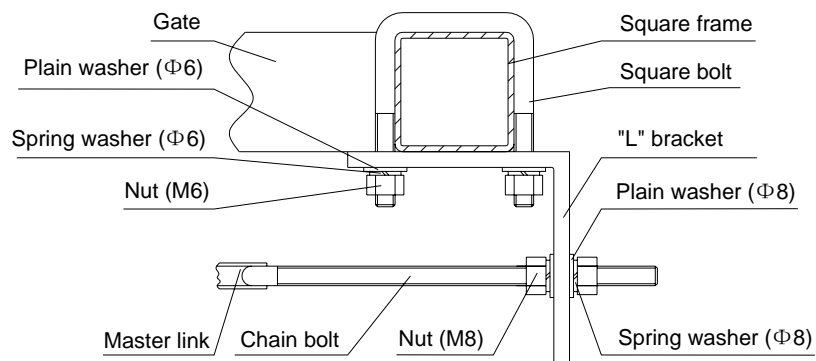


Fig.6

If the gate is of round frame style, use the round bolts shown.

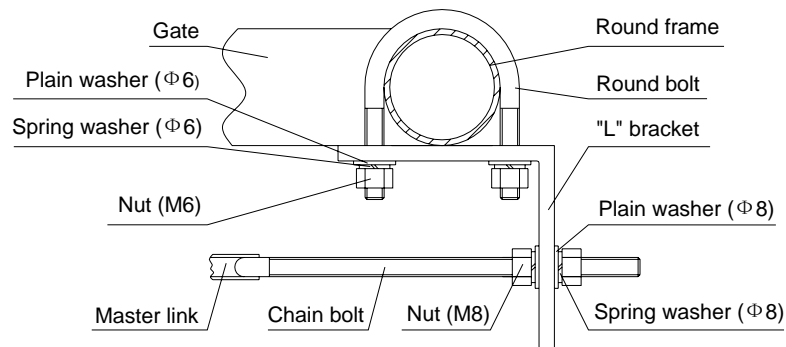


Fig.7

Chain

Close the gate and attach a chain bolt to the chain using enclosure master links. Tighten the chain bolt to the bracket with washers and nuts. Pull the chain through the sprockets to the other chain bracket at the opposite end of the gate see Fig.9. Connect the other end of the chain and the chain bolt, and then tighten the chain bolt to the chain bracket. Thread up the chain by adjusting the chain bolt. Cut the chain to length if necessary. Tighten the chain by tightening the chain bolts at either end. See Fig.8.

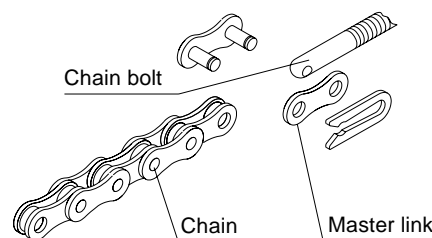


Fig.8

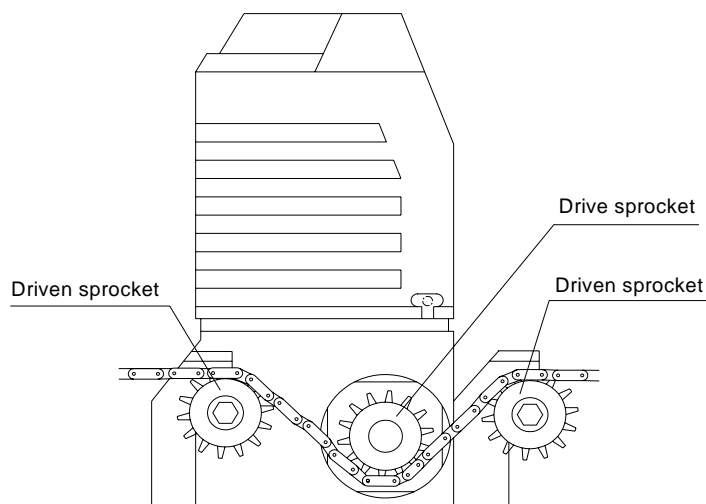


Fig.9

Sprocket cover

Mount the sprocket cover with screws.

**Limit switch**

L110C-Magnets for limit switch (see Fig.10)

- Install the magnet as shown in Fig.10 below. The magnet and limit switch are used to control the position of the gate.
- When the magnet is installed, release the gear clutch and push the sliding gate manually to pre-determine the position. Fix the magnet bracket to the gate and then tighten the gear clutch. The lower bracket is for open position and upper bracket is for close position. Finally adjust the magnet to the proper position by moving the gate with the motor. The magnet should be 10~15mm away from the magnetic limit switch. If it is too far away, the switch will fail to work. Adjust the position of the magnet until the positions of the opening and closing meet the requirement.
- **Please note the position of two magnet brackets (fixed plate) are different: one is upper and another is lower. Verify and if necessary exchange the two brackets position. Also if necessary exchange the limit switch wires CL (close) and OP (open).**

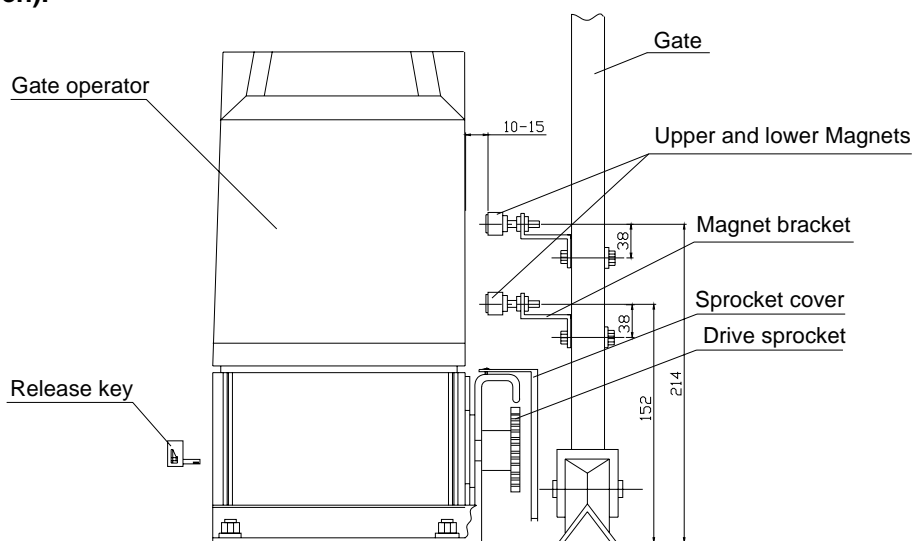


Fig.10 L110C

**L110-Spring limit switch (see Fig.11)**

- To ensure safety, it is recommended to install limit devices at both ends of the gate to prevent the gate from sliding out of the rails. The rails must be installed horizontally.
- The spring limit switch and blocks are used to control the position of the gate.
- When the block is installed, release the gear clutch with the key and push the sliding gate manually to pre-determine the position, fix the block bracket to the gate and then tighten the gear clutch with the key. Moving the gate electrically, adjust the block bracket to the proper position until the position of the opening and closing meet the requirement.

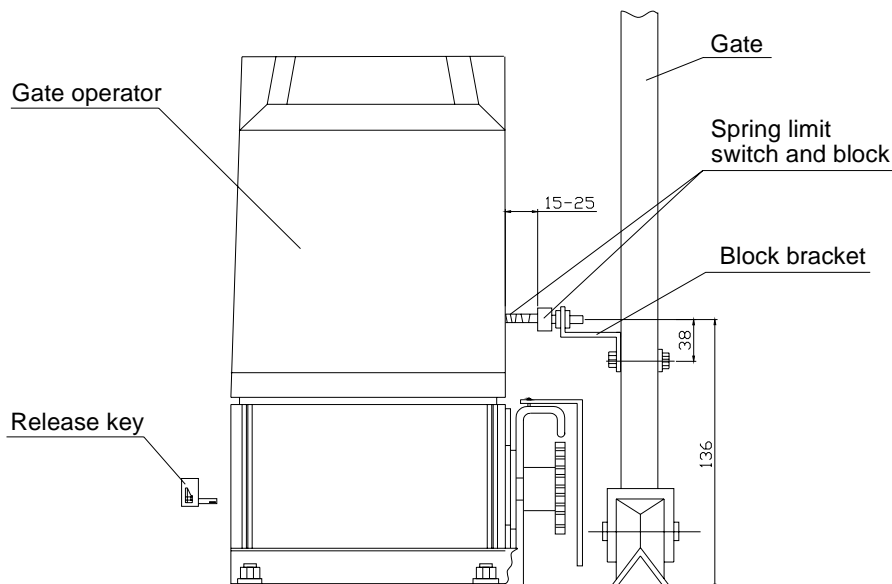
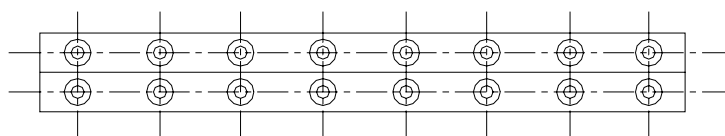


Fig.11 L110

**6. Connect the wires**

Make sure that the power is OFF before making any electrical connections. Remove the cover of the control box, perform the wiring and replace the cover again. (Refer to Fig.12)



NC	CLOSE	COM	OPEN	COM/U	V	W	⏏
LIMIT SWITCH				MOTOR		EARTH	

Fig.12

**7. Adjustment**

Check the power supply, grounding and wiring before running the device. Release the clutch with the key to determine whether or not the gate can be moved manually. If everything is in good working order, engage the clutch with the key. When engage the clutch with the key, be sure to close completely to prevent from damage. Switch on the power and run the operator to ensure that the gate is sliding smoothly. Adjust magnet or block position until the gate opened and closed properly at the limited positions.

Tighten (or release) the force adjust bolt on the motor top to increase (or decrease) the output torque (i.e. output force of the operator), and ensure the gate safely.  
Adjust the output torque in the safety range before using the operator.

### **8. Maintenance**

Ensure the power is switched off before removing the cover.  
Loosen the oil screw on the motor to avoid leakage.  
Ensure the operator is well earthed.  
Regularly grease the wheels and axles to ensure the gate moves smoothly.  
Keep opener clean at all times.



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