MAX-3500

SWING GATE OPERATOR



Installation and Operating Manual

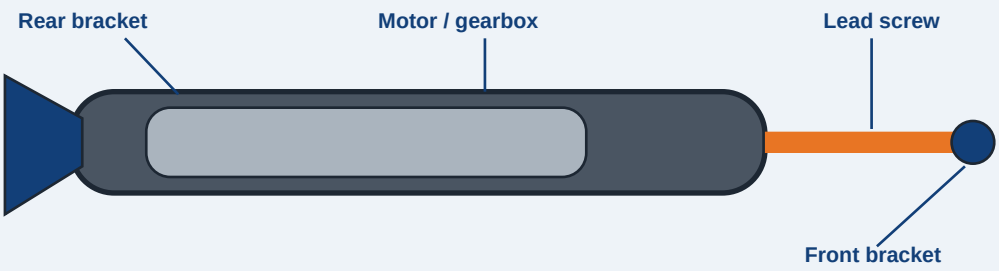
SGC ACCESS CONTROLS

Gate Access Control Solutions

1. General Information

The **MAX-3500 Swing Gate Operator** is an electromechanical linear operator for automating residential and light-commercial swing gates. The operator housing contains the motor, reduction gearing, and lead screw. Built-in electrical limit switches control the open and closed positions.

A self-locking worm-drive and planetary gear system helps hold the gate when the motor is off. The keyed manual-release system allows the gate to be moved by hand during a power outage or control-system fault.



1.1 Application Range

Operator version	Maximum leaf width	Maximum leaf weight
Standard / long stroke	6.6 ft	2,205 lb
Standard / long stroke	8.2 ft	1,764 lb
Standard / long stroke	9.8 ft	1,323 lb
Long stroke	13.1 ft	1,102 lb
Long stroke	16.4 ft	882 lb
Short stroke	6.6 ft	1,764 lb
Short stroke	8.2 ft	1,323 lb
Short stroke	9.8 ft	882 lb

Select the exact MAX-3500 version and installation geometry for the gate size, wind loading, hinge condition, and duty cycle. Gate weight alone does not determine suitability.

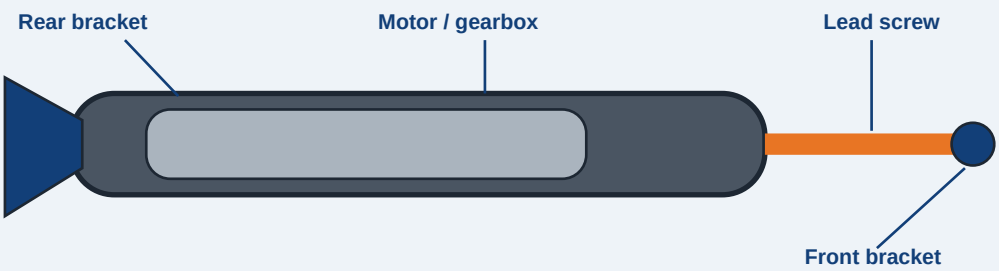
1.2 Specifications

Item	MAX-3500 specification
Input power	AC or DC version, as marked on operator/control panel
Rated power	Model dependent: 200-450 W
Finish	Black / gray
Overall size	Approx. 41.3 × 9.6 × 9.8 in
Limit control	Built-in adjustable open and close microswitches

2. Delivery Set

Unpack the MAX-3500 system and inspect all components before installation. If any item is missing or damaged, contact SGC Access Controls before proceeding.

No.	Component	Qty.
1	MAX-3500 linear operator	2
2	Rear fastening bracket	2
3	Front fastening bracket	2
4	Fastener set	1
5	Control unit with enclosure	1
6	Key switch	1
7	Warning / signal lamp	1
8	Photoelectric safety sensors	1 pair
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Verify supplied quantities against the purchase order. Accessories and control equipment can vary by system configuration. Use SGC Access Controls approved replacement parts and accessories.

Required installation tools

SAE wrench and socket set; Phillips and slotted screwdrivers; metal and masonry drill bits; electric drill; pliers; hacksaw or suitable metal-cutting tool; tape measure; level; marker; personal protective equipment.

3. Safety Instructions

WARNING - A moving gate can cause serious injury or death. Follow all applicable local codes and current gate-operator safety standards.

1. Read this entire manual before installation, adjustment, operation, or service.

2. Disconnect all power sources before wiring, releasing, adjusting, or servicing the operator.

3. Installation and repair must be performed by a qualified gate-automation technician.

4. The gate must move freely by hand, be structurally sound, and have mechanical stops for the fully open and fully closed positions.

5. Keep people, vehicles, and objects clear of the moving gate. Never allow children to play near the gate or controls.

6. Install controls at least 59 in above grade, within sight of the gate, and far enough away that the gate cannot be touched while a control is operated.

7. Use monitored entrapment-protection devices appropriate for the installation. Test safety sensors at least monthly.

8. Route and protect wiring so it cannot contact moving parts, sharp edges, or water entry points.

9. Do not modify the MAX-3500 or use it for purposes other than swing-gate automation.

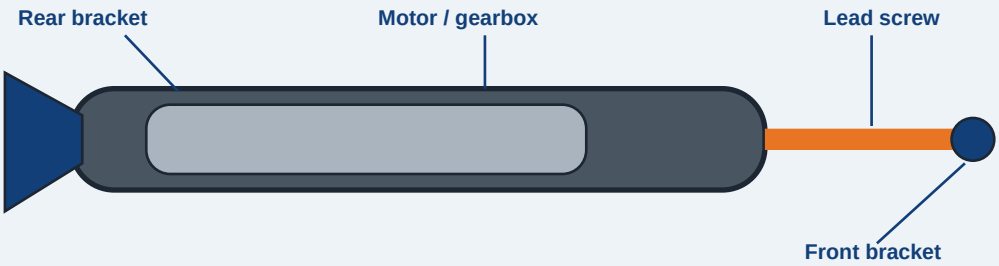
10. Keep this manual available for installers, service personnel, and the property owner.

Wiring guidance

Use copper conductors with insulation rated for the circuit and environment. Typical equivalent conductor sizes from the source manual are: safety/control conductors approximately **20 AWG**; power conductors approximately **16 AWG**. Confirm voltage drop, load, run length, and code requirements before selecting wire.

A disconnecting means must provide at least 0.12 in contact separation where required. Line-voltage wiring must be completed by a qualified electrician.

4. Operator Components



Callout	Component	Function
1	Operator body	Houses motor and reduction gearing
2	Front bracket	Connects operator rod to gate leaf
3	Rear fork / bracket	Connects operator body to gate post
4	Lead screw	Transfers motor rotation into linear movement
5	Release unit	Allows keyed manual operation
6	Open / close limits	Stops travel at adjusted positions

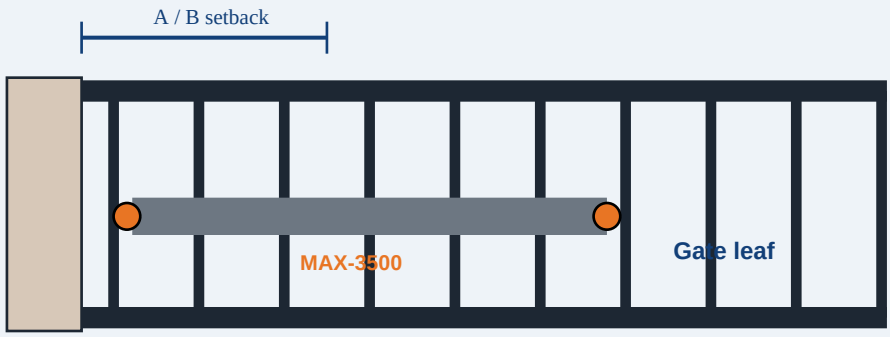
Fastener note

The original M8 nut specification corresponds approximately to a **5/16 in nominal diameter**. Do not substitute hardware solely by nominal conversion; use the supplied fastener or an SGC Access Controls approved equal with the correct grade, thread, fit, and corrosion resistance.

Pre-installation gate check

With the operator disconnected, move the gate through its complete travel. Repair binding hinges, sagging frames, damaged stops, or excessive play before mounting the MAX-3500. Confirm that the post and gate mounting points can withstand operator force.

5. Inward-Opening Installation



Mount the rear bracket to the post and the front bracket to the gate leaf. Keep both pivot points level and align the MAX-3500 horizontally. The dimensions below are converted to SAE and rounded to the nearest 0.01 in.

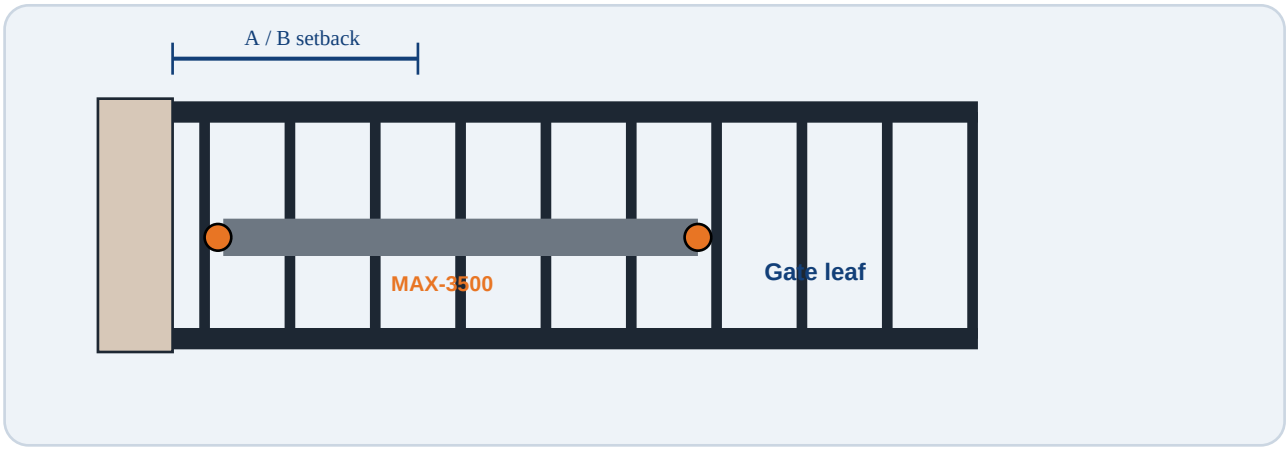
Stroke	Opening	A	B	C max.	D
Short	90°	5.12 in	5.12 in	2.36 in	28.35 in
Short	120°	5.12 in	4.33 in	1.97 in	28.35 in
Long	90°	7.87 in	7.87 in	4.72 in	36.22 in
Long	120°	7.87 in	5.51 in	2.76 in	36.22 in

Do not exceed dimension C. Changing A or B affects opening angle, leaf speed, and available operator force. Verify geometry through the full travel before welding or permanently fastening brackets.

Installation sequence

1. Locate the hinge centerline and mark A and B. **2.** Attach the rear bracket to a structurally adequate plate or post. **3.** Fit and lubricate the rear pivot. **4.** With the gate closed, position the front bracket on the gate leaf at dimension D. **5.** Confirm the operator is level. **6.** Manually test full travel, then permanently fasten the bracket.

6. Outward-Opening Installation



An outward-opening gate typically requires an additional rear mounting bracket so the MAX-3500 remains inside the protected property side while driving the leaf outward.

Dimension	Converted SAE value
A	5.12 in
B	5.12 in
E	28.35 in

Procedure

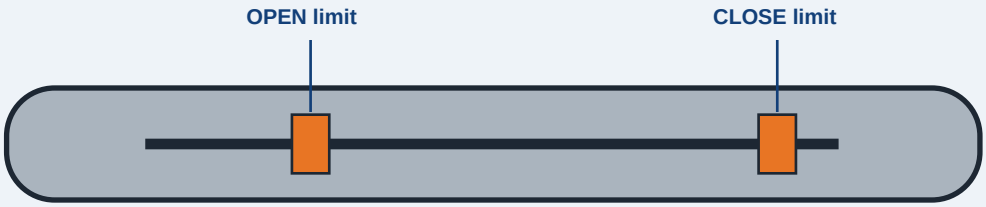
1. Measure and mark A and B from the gate hinge axis. **2.** Fabricate or install the additional rear bracket on a structurally sound post. **3.** Mount the rear pivot. **4.** Open the gate to the desired position, measure E, and locate the front bracket. **5.** Confirm the operator remains level and does not bind through the full arc. **6.** Permanently fasten only after a complete manual travel test.

Maintain required clearance from public sidewalks, roads, and property lines. Confirm that an outward-moving leaf cannot strike a person, vehicle, or object.

Mounting quality checklist

Brackets rigid and aligned; pivots lubricated; operator level; no interference at either end of travel; cables protected; mechanical stops installed; safety devices positioned and wired; all fasteners tightened to the hardware manufacturer’s specification.

7. Extreme-Position Adjustment



Slide each microswitch along the guide, test, then tighten.

Preparation

1. Disconnect power. **2.** Remove the operator cover and lead-screw casing by loosening the retaining screws. **3.** Install the front and rear brackets on the operator. **4.** Release the operator for manual gate movement.

Open limit

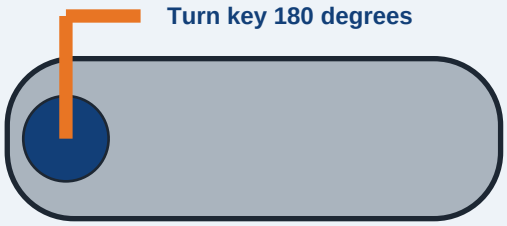
Move the gate to the fully open mechanical stop. Loosen the open-limit microswitch, slide it along the guide until it is actuated by the travel slide, then tighten it.

Closed limit

Move the gate to the fully closed mechanical stop. Loosen the close-limit microswitch, slide it until actuated, then make the small final adjustment required for reliable switching and tighten it.

Restore power and test several complete cycles while maintaining a clear gate area. Confirm that each limit switch stops travel reliably and that the gate does not load heavily against a mechanical stop.

8. Manual Release



Disconnect power before manual release.

1. Disconnect operator power. **2.** Lift the release cover. **3.** Insert the key and rotate it **180 degrees**. **4.** Move the gate by hand. **5.** To re-engage, return the gate to a safe position and rotate the key 180 degrees back. **6.** Remove the key, close the cover, restore power, and test normal operation.

Never release the operator while the gate is moving or when the leaf could move unexpectedly because of wind, slope, imbalance, or stored mechanical force.

9. Maintenance

Inspect the gate and MAX-3500 at least every six months, or more frequently where duty cycle, weather, or site conditions require. Monthly, test all entrapment-protection and warning devices.

Inspection item	Required action
Gate movement	Release and confirm smooth, even manual travel
Brackets / fasteners	Check alignment, cracking, looseness, and corrosion
Wiring / enclosures	Check damage, strain relief, seals, and water entry
Limits	Confirm repeatable open and close stopping positions
Safety devices	Test each device and correct any fault before use
Operator exterior	Keep clean; do not pressure-wash or allow water entry
Service	Use qualified personnel and approved replacement parts

Record installation date, maintenance, adjustments, and safety-device tests. Contact SGC Access Controls for MAX-3500 parts, technical support, and current product information.

MAX-3500 Installation Record

Keep this page with the gate system records.

Field	Record
Installation date	
Property / site	
Installing dealer	
Installer / technician	
Operator serial number - gate 1	
Operator serial number - gate 2	
Control panel / board	
Power configuration	
Safety devices installed	
Open limit tested	Pass / Fail
Close limit tested	Pass / Fail
Entrapment protection tested	Pass / Fail
Manual release demonstrated	Yes / No
Owner instructed and manual delivered	Yes / No

Service Notes

Date	Work performed / test results	Technician

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