

# WING

## 300 / 400 / 600



Operating and installation instructions

## General safety instructions and checklist

This electric gate operator complies with European Directives: 89/336/EEC and 73/23/EEC and subsequent amendments.

When installed correctly this electrically operated motor complies with all relevant safety standards.

Please ensure the operating manual is fully read and understood before installation and operation.

Installation should only be carried out by a competent and qualified person.

Always ensure that all people especially children, animals and objects are well away from the gate opening area during the gates operation.

Keep remote control transmitters out of reach of children, to prevent unintentional operation.

Do not intentionally obstruct the gate/s in any way during operation.

Do not modify or attempt to modify any part of the gate motor or control system.

This gate motor should always be installed with safety in mind as prescribed by the standard EN12978. Safety Photocells, safety edge or induction loops should be used correctly wherever possible.

In case of malfunction or power failure, this device is supplied with a manual release which is operated by a manual key to release the motor.

Always ensure that the power supply is off before attempting installation or to alter any settings.

Only allow gate operation when in full view of the complete gate system.

Basic maintenance should be carried out regularly, such as to ensure safe working of the gate. Safety devices should be checked on a monthly basis. The gate motor should be kept clean at all times.

The mechanical parts of the gate motor conform to standards EN12604 and EN12605.

It is the responsibility of the installer to ensure the safe working of the automated gate. The installation must conform to standards EN12453 and EN12445. Test pressure settings and Safety Photocells conform to EN 12445.

The end user should be fully instructed in the safe working of the gate, and should be given all safety and installation manuals.

All packaging material and unused equipment should be disposed of in the correct, environmentally friendly way.

Never install devices where a user can reach over or through an automated gate system. All external electrical components (Photocells, keypads, flashing lights etc), must be connected in accordance to EN 60204-1 and amendments made to point 5.2.2 of EN 12453.

The power supply, control panel and motor should be earthed properly. The mains power supply should be fit for purpose and fitted with omnipolar switch with a contact opening distance of 3mm or more. A 6A thermal circuit breaker is also recommended.

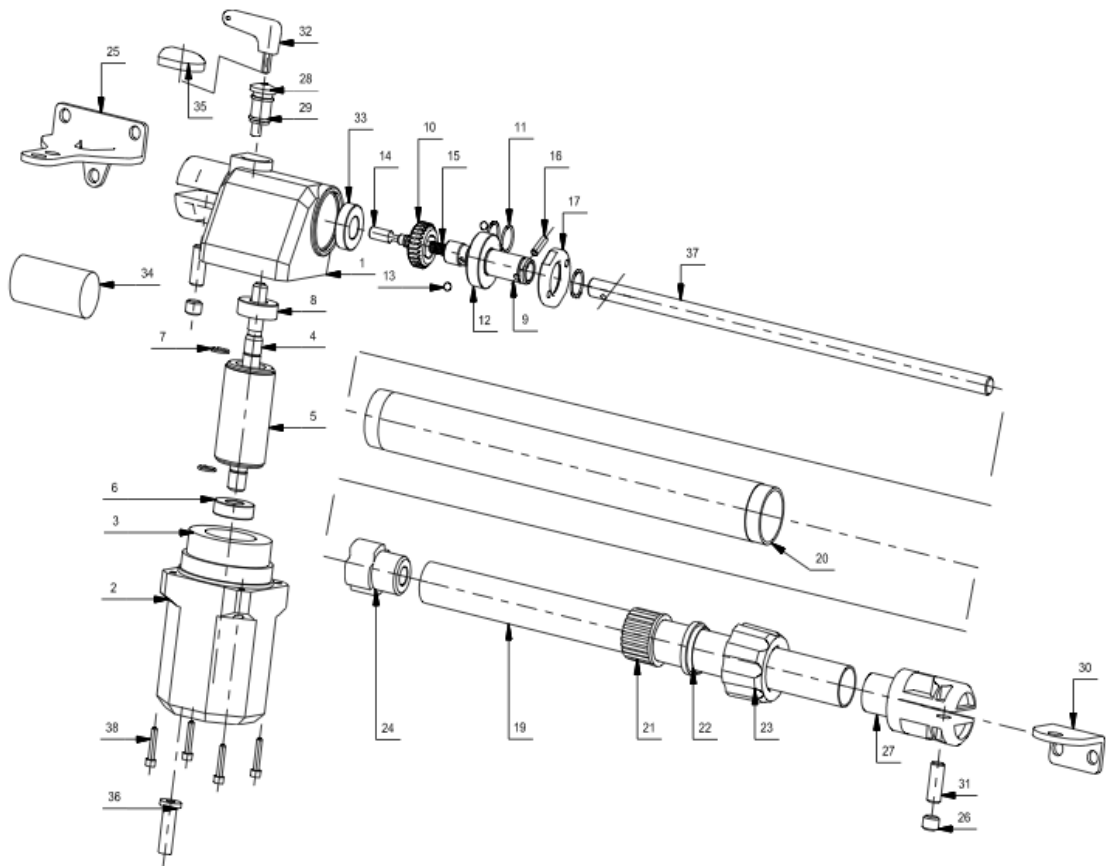
The motor is CE marked by Stateurop, the manufacturer. The automated gate system must be certified by the installer as being compliant with the European Machinery Directive, and be given an appropriate CE certificate to state that the gate and automation comply with current regulations for safety.

Gateway Control Ltd declines all responsibility for any consequences resulting from improper use or installation, or failing to observe good technical practice.

## 1. Description

Description of maintenance	Maintenance Schedule
Clean and check safety Photocells and functions	Monthly
Check free movement of gate manually	Monthly
Clean foliage or insects from gate or control box	Monthly

The Wing ram is an electro-mechanical gate operator which drives the gate by worm screw drive. The operator is irreversible and locks mechanically in the open and closed position when not in use.



PART	QTY	CODE	DESCRIPTION	PART	QTY	CODE	DESCRIPTION
1	1	100759	Motor Top Casing LH Grey	20	1	100762	Grey Aluminium Tube 300mm
1	1	100758	Motor Top Casing RH Grey	20	1	100763	Grey Aluminium Tube 400mm
2	1	100761	Motor Base Casing Grey	20	1	100764	Grey Aluminium Tube 600mm
3	1	100840	Motor - 220V, 45mm	21	1	100829	Piston Rod Guide
4	1	100651	Motor Shaft	22	1	100625	Scraper Ring
5	1	100841	Rotor 45mm	23	1	100827	Piston Rod Lock Nut
6	1	100278	Bearing 6202 ZZ	24	1	100828	Female screw
7	2	100706	Ring E15	25	1	100823	Rear Mounting Wall Bracket
8	1	100291	Bearing 6202 2RS	26	2	100705	Grub Screw M14 x 10
9	1	100885	Unclamping Shaft	27	1	100906	Alu. Piston Rod Terminal Grey
10	1	100650	Toothed wheel / Cog	28	1	100624	Aluminium Unclamping
11	3	100789	Ring E20	29	2	100657	O Ring
12	1	100709	Bearing 6004 ZZ	30	1	100825	Front mounting wall bracket
13	2	100658	Towing Ball	31	1	100654	Ram Bracket Pin
14	1	100655	Unclamping Pin	32	1	100218	Manual Release Key
15	1	100641	Unclamping Spring	33	1	100707	Bearing 6003 ZZ
16	1	100898	Pin 5mm x 20mm	34	1	100184	Capacitor 8uF
17	1	100661	Aluminium Locking Nut	35	1	100755	Manual release dust cap
18	1	100909	Fibre Lock Nut	36	1	100748	Cables Press
19	1	100712	Stainless Steel Piston 300mm	37	1	100716	Screw drive 40
19	1	100713	Stainless Steel Piston 400mm	37	1	100716	Screw drive 50
19	1	100738	Stainless Steel Piston 600mm	37	1	100716	Screw drive 70
				38	4	100313	Cap Screw M5 x16



Wing 300 – Distance between ram mounting pins, W – 930mm  
Wing 400 – Distance between ram mounting pins, W – 1130mm  
Wing 600 – Distance between ram mounting pins, W – 1540mm

## 2. Technical Specification

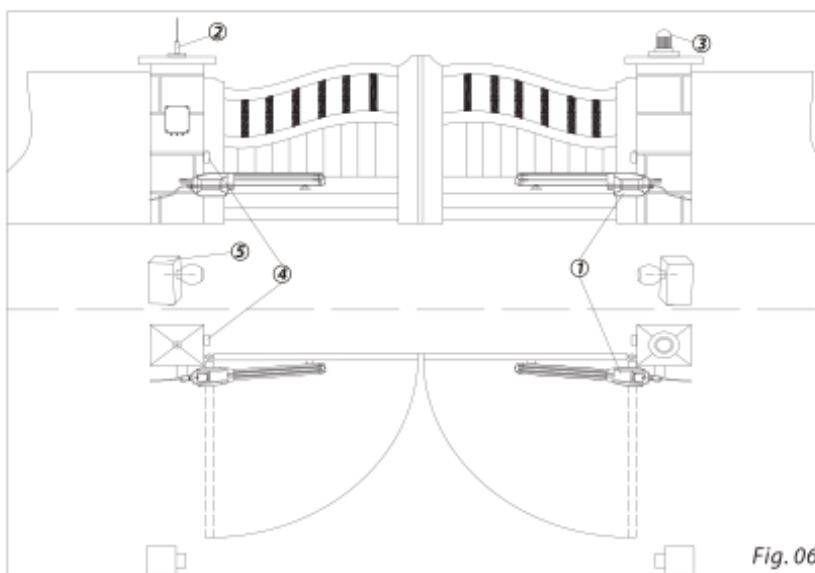
	WING 300	WING 400	WING 600
Maximum width of gate leaf	3000mm	4000mm	5000mm
Maximum weight of leaf	200Kg	200Kg	200Kg
Motor Stroke	300mm	400mm	600mm
Motor Power	180 W	180 W	180 W
Power supply	230V	230V	230V
Power absorption	0.9A	0.9A	0.9A
Maximum motor thrust	1600N	1600N	1600N
Operating temperature	- 25°C to + 60°	- 25°C to + 60°	- 25°C to + 60°
Opening time	17 seconds	22 seconds	33seconds
Thermal Protection	150°C	150°C	150°C
Frequency of use	35%	35%	35%
Lubrication	GREASE	GREASE	GREASE

## 3. Pre-liminary checks - Installation

Ensure the gate leaf is securely installed, and has no signs of wear. The gate must be fixed on suitable hinges to enable easy and free opening and closing.

Gate leaf must be within size and weight restraints to suit the motor capability – maximum 2.5 metres in width.

The condition of the gate and structure directly affects the reliability and safety of the automated system.

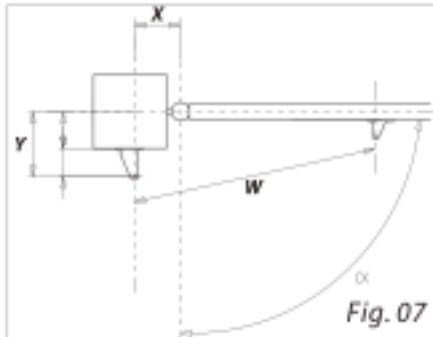


1. Motors 2. Antenna 3. Flashing lamp 4. Photocells (external) 5. Photocells (internal)

Note: Electric cabling should be run in suitable conduit or pipes.

Mains power supply (230V) should be run separately to any low voltage cabling to avoid interference.

## 4. Installation dimensions



Determine the position of the gate motors on the gate leaf and gate post, taking care to avoid any obstacles such as walls, fences or plants etc

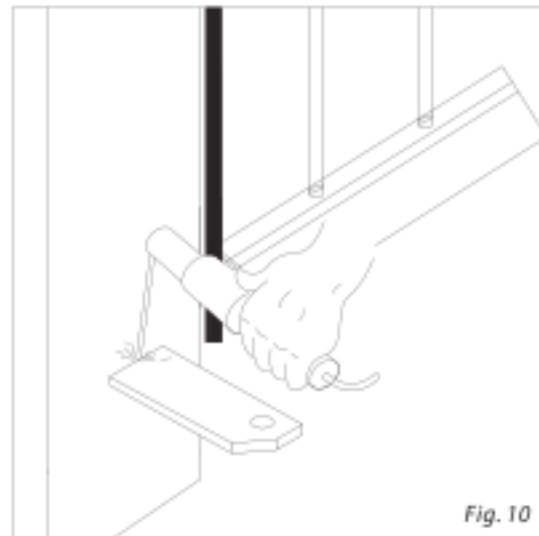
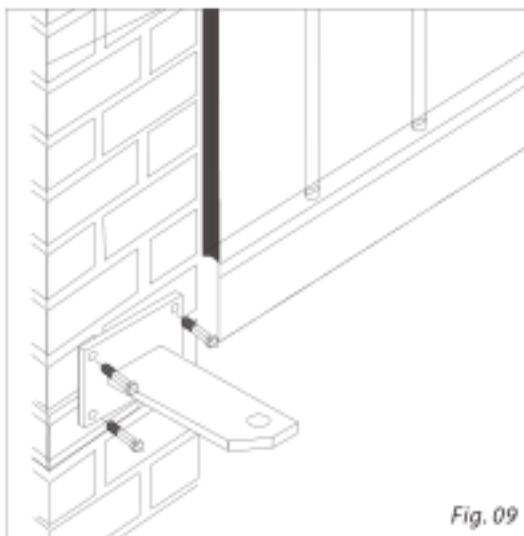
Where possible, keep the difference between X and Y to 40mm to avoid jerky movement and speed variations

Greater opening angles are possible by reducing dimension Y and increasing dimension X

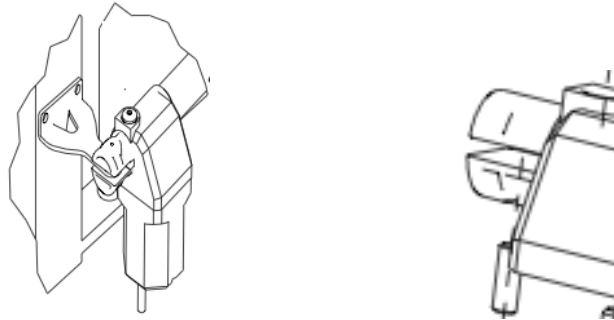
Motor	Opening Angle 95°				Opening Angle 120°			
	W	X	Y	Z	W	X	Y	Z
WING 300	930	140	140	370	930	170	120	370
WING 400	1130	185	185	270	1130	250	130	470
WING 600	1540	280	280	670	1540	350	140	670

## 5. Installation

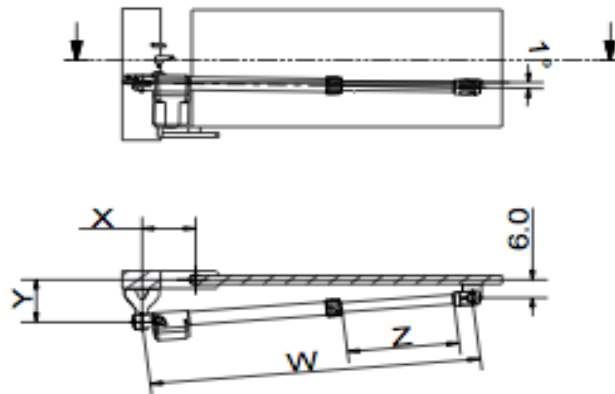
1 - Once the geometry and has been calculated install the Ram mounting bracket to the pier or gate post. The bracket can be fixed using suitable coach screws, masonry fixings, or it can be cut and welded to a metal post. Ensure that the bracket is installed horizontally. See Fig. 09 and Fig.10



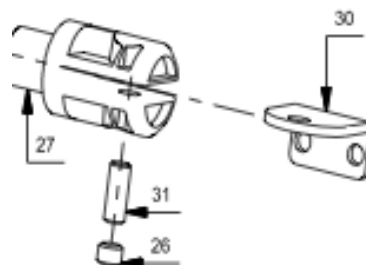
2 - Mount the Ram motor onto the rear bracket and secure in place with the pin and grub screw provided, as Fig 11



3 – Place the Wing motor so that the motor is inclined by 1°. As indicated in Fig. 12 below. With the gate leaf in the closed position and the motor fixed onto rear bracket, turn and slide the screw piston to extend piston to the end of end of stroke. Turn the screw back one complete turn.



4 – Fix the front mounting bracket to the gate leaf whilst ensuring the slight motor incline as mentioned above. Fix the motor to the front bracket by pin and grub screw. See Items 31 and 26 on the exploded diagram below.



5 – Ensure the motor is manually released. Push the gate leaf open and closed and check the movement is smooth with no significant friction points.

## 6. Wiring

The motor is supplied pre-wired with power cable, which needs to be wired into control panel (MC2 – separate instruction manual)

## 7. Commissioning

Once the system has been fully fitted and connected to control panel (MC2), the system needs to be fully commissioned and tested.

It is recommended to have the swing gates locked into the half open / closed on the first operation, just to ensure that the motor is running the right direction on the first command.

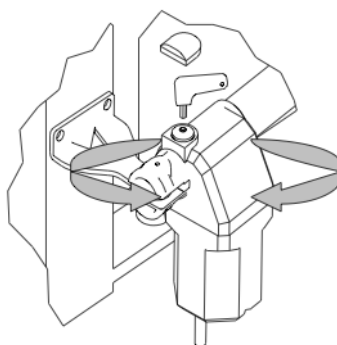
Pay special attention to safety devices.

Check the control panel logic and set up to ensure all suitable functions are activated and programmed properly.

Fully explain the system to the end user and demonstrate the functions and features that have been set up.

Demonstrate the manual release mechanism as shown in below.

Turn release key 'Anti-Clockwise'  
To unlock Ram (manual)



Turn release key  
'Clockwise' to lock Ram on

The automated gate system must be used with due care and attention at all times.

Basic maintenance should be carried out at regular intervals to ensure that the gate system is operating correctly and safely.

Description of maintenance	Maintenance Schedule
Clean and check safety Photocells and functions	Monthly
Check free movement of gate manually	Monthly
Clean foliage or insects from gate or control box	Monthly
Check the force of the gate leaf when moving	6 Monthly

Always consult a specialist if any problems occur which are not solved by basic maintenance

Always isolate and disconnect power supply to gate control board and motor before opening control box or gate motor

### Basic Troubleshooting for incorrect operation of motor and control

- Check the power supply and continuity using suitable meter instrument after open and closed commands have been given.
- If the motor direction is incorrect, such as the gate leaf closes when it has been given an open command, the motor wiring will need to be inverted (see wiring instructions for MC2 control panel). Swap the motor phase wires on control panel
- If the gate control panel has a problem, disconnect all additional equipment such as intercoms, safety photocells, push buttons etc. Then run tests on the basic system, then re-connect each item of equipment individually and test system until the faulty device has been found and isolated.



### Declaration of Conformity & Installation Hand-over

Gate type: \_\_\_\_\_ (Swing / Slide etc)

Manufacturer and model of gate: \_\_\_\_\_ (including material of gate)

Unique Serial No. \_\_\_\_\_ (individual number given by installing company)

Gate size: \_\_\_\_\_

Operator manufacturer: \_\_\_\_\_

Operator model / kit: \_\_\_\_\_

Installation details and checklist:

- |  |                          |
|--|--------------------------|
| Electrical power supply tested                           | <input type="checkbox"/> |
| Installed in accordance with manufacturers instructions  | <input type="checkbox"/> |
| Safety devices installed and checked thoroughly          | <input type="checkbox"/> |
| CE Mark applied  | <input type="checkbox"/> |
| Full demonstration carried out with end user             | <input type="checkbox"/> |
| Hand over completed with manual release keys and manuals | <input type="checkbox"/> |

The above gate and automation has been assembled, installed, connected and tested in accordance with manufacturers installation instructions at the site (as stated below) and accordingly is in conformity with the provisions of the Machinery Directive (89/392/CEE as amended by 91/263/CEE, 92/31/CEE and 93/68/CEE)

Site Address: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Declaration made by: \_\_\_\_\_ (Signature)

\_\_\_\_\_ (Print name)

On \_\_\_\_\_ (Date)

On behalf of: \_\_\_\_\_ (Responsible Person)  
 \_\_\_\_\_ (Company Address)  
 \_\_\_\_\_

Received by: \_\_\_\_\_ (Customer signature)

THE MACHINERY TO WHICH THIS DECLARATION OF INCORPORATION RELATES MUST NOT BE PUT INTO SERVICE UNTIL THE RELEVANT MACHINERY INTO WHICH IT IS TO BE INCORPORATED HAS BEEN DECLARED IN CONFORMITY WITH THE PROVISIONS OF THE MACHINERY DIRECTIVE

Customer Copy – to be completed, signed and kept by end user

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Installer Copy – to be completed, signed and kept by installer