



GR300-400-600

MOTOR FOR SWING GATES

INSTALLATION MANUAL

Our compliments for your excellent choice. The GR300-400-600 electro-mechanical gear motor has been produced for reliability and high quality. This Manual will offer information you may need to install your gear motor assuring long-lasting performance and to safeguard your safety.

HOWEVER CAUTION IS UNQUESTIONABLY INDISPENSABLE AND NOTHING IS BETTER THAN PREVENTING ACCIDENTS. GR products have been made to conform with rules and laws in force at time of manufacture.

 This manual is designed exclusively for the specialized installation expert in the criteria of construction and equipment to assist in the protection against accidents in the installation and use of the gate; door and automation of such gates (adhere to the rules and laws in force).

 On completion the installer should issue to the end consumer an instruction manual according to EN 12635.

 Before proceeding with the installation the installer must provide an analysis of the identification and management of risks as per the standards EN 12453 and EN 12445.

 All wiring of the various external electrical components connected to the automation (e.g. Photocells, flashing lights, keypads etc) must be carried out according to EN 60204-1 and the amendments made of the point 5.2.2 of EN 12453.

 It is prohibited to do any repair or adjustment of the equipment if you have not taken all necessary precautions to avoid possible accidents (example: power supply disconnected, engine block). All mechanisms in motion must be equipped with appropriate protections.

 The mains power line must be protected for maximum current in locked rotor condition as per government electrical laws.

 Install the gear motor on gates that conform to EN 12604.

 Perform the measure of strength developed by the gear motor and take the appropriate steps as per EN 12445.

 Positioning photocells: These safety devices must be installed at a height not exceeding 70cm from the ground and at a distance from the floor movement of the door of no more than 20cm. Their proper functioning of the photocells must be verified at the end of installation according to Section 7.2.1 of EN12445.

 Keep the activation controls of automation out of reach of children. The controls should be installed at a minimum 1.5m height above the ground and outside the range of actions of moving parts such as the gate.

 All activation actions must be executed only at points from where the automation is fully visible.

 Operate the remote only in view of automation.

 Store carefully this manual in a suitable place known to all interested people.

Any unauthorized and arbitrary modification made to this product, releases the company GR Sistemi Automatici di apertura Srl and from any liability resulting from damage or injury to things, people or animals.

The non-observance of regulations and of safety standards here listed releases the company GR Sistemi Automatici di apertura Srl from any liability resulting from damage or injury to things, people or animals.

The automation must be coupled to a control board equipped with torque regulation that provides an anti crushing safety as described in EN 12453 - EN 12445

This product falls within the scope of the Directive 2012/19 / EU concerning the management of waste electrical and electronic equipment (WEEE). The appliance must not be disposed of with domestic waste as it is made of different materials that can be recycled at the appropriate facilities. Inquire through the municipal authority regarding the location of the ecological platforms to receive the product for disposal and its subsequent correct recycling. Furthermore, it should be remembered that, upon purchase of an equivalent appliance, the distributor is obliged to collect the product for disposal free of charge. The product is not potentially dangerous for human health and the environment, not containing harmful substances, but if abandoned in the environment negatively impacts on the ecosystem. Read the instructions carefully before using the appliance for the first time. It is recommended that you do not use the product for any purpose other than that for which it was intended, there being a danger of electric shock if used improperly.



The crossed-out bin symbol, on the label on the appliance, indicates the compliance of this product with the regulations regarding waste electrical and electronic equipment. Abandonment in the environment of the equipment or illegal disposal of the equipment is punishable by law.

SAFETY RULES

During the installation and the use of the automation, pay attention to the following safety rules:



Distance security!



Mechanisms moving!



Do not install automation in an environment saturated with explosive mixtures!



Electric Shock!



Use gloves!



Use welding glasses!



Maintain ear protection!

MAINTENANCE

All repairs must be carried out by qualified people.



Before each intervention remove power through the switch and lock in that position



The equipment must be maintained so as to preserve the conditions that ensure safe and efficient operation



Always use original spare parts



Do not make interventions that modify the machine.



The modified equipment requires new CE mark



The settings of the operator must be performed by qualified personnel, in accordance with the rules of reference. During these operations provide the presence of two operators for safety.

DEMOLITION

You have to operate the elimination of the materials in conformity with the regulations in force. All materials must be divided by type (copper, aluminium, plastic, electrical parts, etc)

DISMANTLING

In order to move away the automation, follow these instructions:

1 - cut off the power supply and disconnect the electrical installation;

2 - dismantle the control console and all the other components of the installation.

If you have noticed that some components have been damaged, you have to replace them.

CONFORMITY DECLARATION:

It's in accordance with Machine Directive 39/89/CE and following modify.

It's in accordance with the following directive CE: Electromagnetic compatibility Directive 89/336/CEE and following modify.

Low tension Directive 73/23/CEE and following modify.

Have been applied the following harmonized norms: EN292/1/2, EN 294, EN60335-1, UNI EN 12453, and what applicable of the EN12445-2000.

USE OF THE AUTOMATION

The gearmotor GR300-400-600 was designed and built for the opening of gates with max of 5 m leaf or weight max. 300kg. The GR Srl assumes no responsibility for a purpose other than that provided by gearmotor GR300-400-600. Since automation can be put into motion in view by button or remotely by remote control, it is essential to check frequently the perfect efficiency of all safety devices. It is advisable to check periodically (every six months) the regulation of electronic friction of which must be equipped the electronic control board.

PRELIMINARY CHECKS

1 - Read carefully the instructions enclosed in this manual.

2 - Make sure that the gate has a rather solid structure and that there is no friction points in its movement.

3 - Make sure that the leaf is suitably balanced, even after the installation of the gear motor.

4 - Check that the electrical installation is in accordance with the characteristic required by the gear motor.

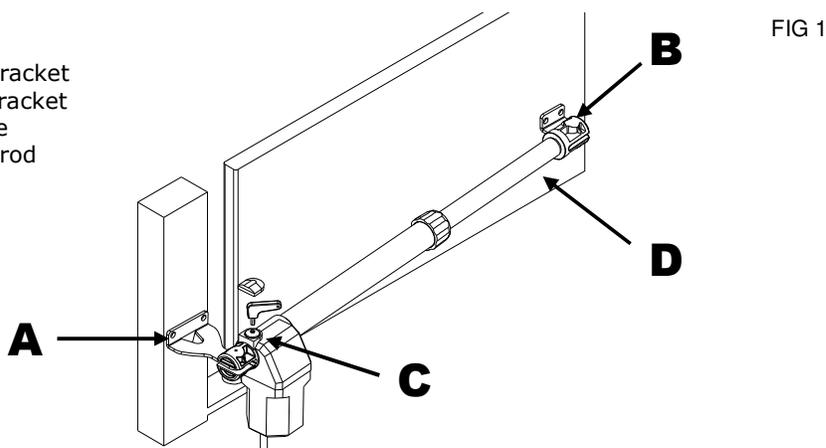
TECHINICAL DATA

	GR300	GR400	GR600
Maximum length of the gate	3,0m	4,0m	5,0m
Stroke	30cm	40cm	60cm
Opening time 1400rpm	17sec	22sec	33sec
Opening time 900rpm	25sec	33sec	50sec
Opening time 900rpm REV	17sec	22sec	33sec
Opening time 12-24vrpm	16sec	21sec	31sec
Opening time 2800rpm	8,5sec	11sec	16sec

	A1V 220V	A2 220V	A1L 220V	A1 REV	A1 110V	A1 12V	A1 24V
Maximum weight of the gate	300Kg	250Kg	300Kg	300Kg	250Kg	250Kg	250Kg
Power supply	220V	220V	220V	220V	110V	12Vdc	24Vdc
Power	350W	180W	350W	350W	350W	70W	70W
Capacitor	8,0µF	8,0µF	8,0µF	8,0µF	25,0µF	-	-
Absorption	1,5A	0,9A	1,5A	1,5A	4,6A	0,5-7,5	0,5-5,5
RPM	1400	1400	900	900	1400	1650	1650
Max. Thrust	2200 N	1600 N	2200 N	2200 N	1250 N	1500 N	1500 N
Operating temperature	-25°C +60°C						
Thermal protection	150°C	150°C	150°C	150°C	150°C	-	-
Use frequency	35%	35%	35%	35%	25%	90%	90%
Lubrication	GREASE						

INSTALLATION

- A** – Pillar bracket
- B** – Gate bracket
- C** – Release
- D** – Piston rod

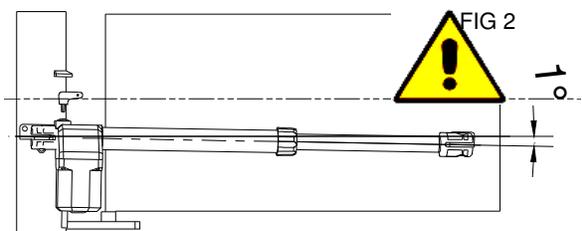


INSTALLATION

To operate a good installation of the gear motors GR 300/400/600, follow these instructions:

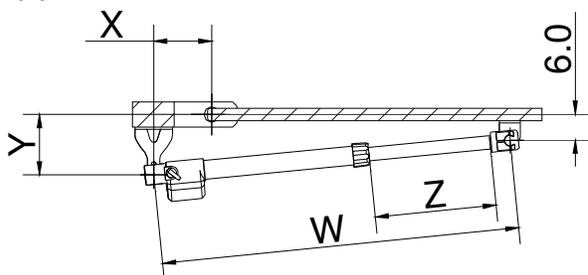
- 1 - Open the box and take out gear motor. Make sure that it has not been damaged during the transport.
- 2 - Make sure that the leaf of the gate is perfectly horizontal.

3 - Place the gear motor inclined approximately 1° below the horizontal line (fig 2)



4- Fix the support plate A on the pillar beside the leaf, taking in account the measures shown in Table 1. Do not forget inclination.

FIG 3



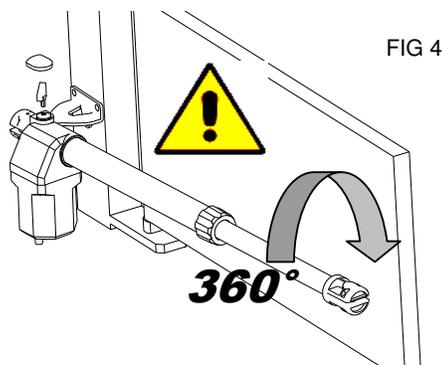
5 - Install the gear motor on to the support plate A and fix it with the bolt.

TAB1

MOTOR	ROTATION 95 °				ROTATION 120 °			
	W	X	Y	Z	W	X	Y	Z
GR300	922	140	140	378	922	160	120	378
GR400	1122	145	145	478	1122	170	110	478
GR600	1532	280	280	678	1532	310	120	678

6 - With gate's leaf closed, turn and slide the screw of gear motor's D shaft, until the end of the stroke

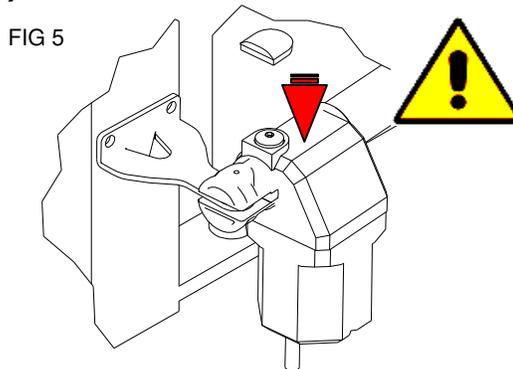
7 - Screw D shaft back on 1 complete turn of 360° (fig 4)



8 - Place B support plate in the hole of D shaft and position it against the gate leaf. Fix it to the gate leaf taking in account the inclination (point nr.3).

9 - Proceed in the same way with the other gate leaf.
10 - Connect the electrical wires and safety devices: Place the mechanical limit stops

11 - Place the cover on the unblocking screw (C) (fig 5)



SCHEDULED MAINTENANCE

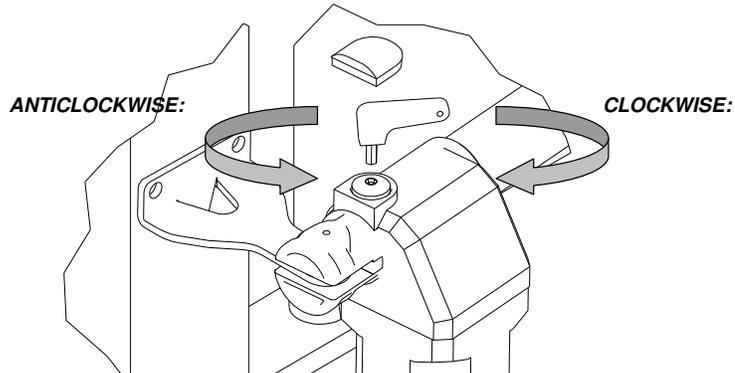
DESCRIPTION	FREQUENCY	ENTRUSTED	OPERATION
Photocells cleaning	Monthly	Operator	Clean with damp cloth
Control of gate hinges and supports, balancing of the gate	Annual	Operator	Check the status of welds and corrosion. Unhook the engine and check the balancing and the eventual points of friction.
Controlling the sensitivity of electronic friction (torque adjustment) of the control board.	Semiannual	Technician	Check the adjustment of the couple as described in EN 12453 - EN 12445
Monitoring current dispersion	Annual	Technician	Verify that the dispersion of current is less than 7.5 A
Control of signals	Semiannual	Operator	Verify that the safety warning signage is complete and intact

EMERGENCY MANOEUVRE

For the manual door locking and unlocking act with the supplied key on the screw C (See fig 1-6).

- 1 - Remove the protection cap
- 2 - insert the key into the seat allocation as in Figure 1
- 3 - Turn the key in the sense of the arrow to the top of the gearmotor to unlock and in the opposite block

FIG 6



SPARE PARTS

