INSTALLATION AND USE MANUAL

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TECHNICAL FEATURES

		ACTUATOR	
Power supply	**V**	**230V 50/60Hz.**	**12V dc**
Motor power	**W**	**300**	**80**
Absorption	**A**	**1,2-1,7**	**0,7-9,5**
Thermic protection	**°C**	**135°C**	
Working temperature	**°C**	**-35°C ./. +80°C**	
Operation		**Electromechanical actuator with worm gear**	
Structure		**Aluminium with epoxy paint**	
Max.leaf lenght	**Mm**	**2600**	
Suggested stroke	**Mm**	**500**	
Stroke time	**Sec.**	**21**	
Revs speed	**G/min**	**1400**	
Reduction ratio		**1:27**	
On-off operation	**%**	**50**	
Push	**N**	**3000**	**2000**
Capacitor	**Mf**	**10**	**-**
Weight	**kg**	**7,1**	

A=open
C=closed

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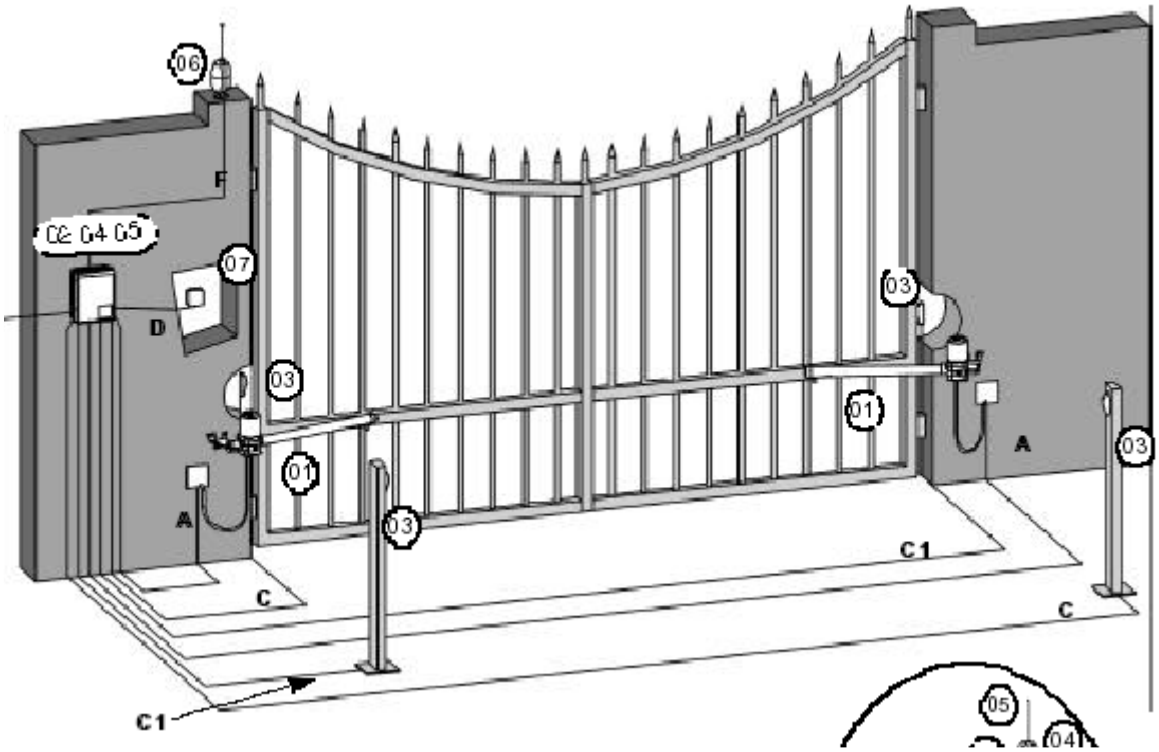
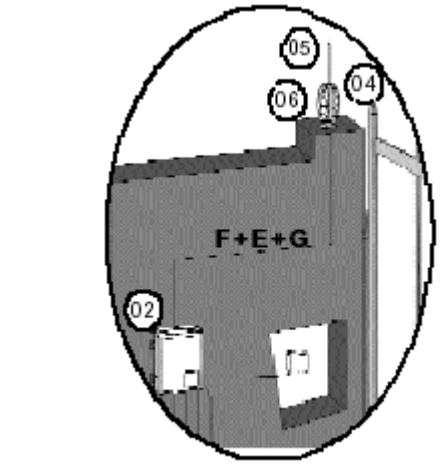
NESTOR COMPANY

Operational diagram for swing gate





Description			230Volt	12Volt
1	Actuators	A	3x1,5+T	2x1
2	Control unit	B	2x1,5+T	2x1,5+T
3	Photocells	C/C1	4x0,75/2x0,75	4x0,75/2x0,75
4	Aerial	E	2x0,75	2x0,75
5	Radio receiver	G	2x0,75	2x0,75
6	Warning light	F	2x0,75	2x0,75
7	Key contactor	D	2x0,75	2x0,75

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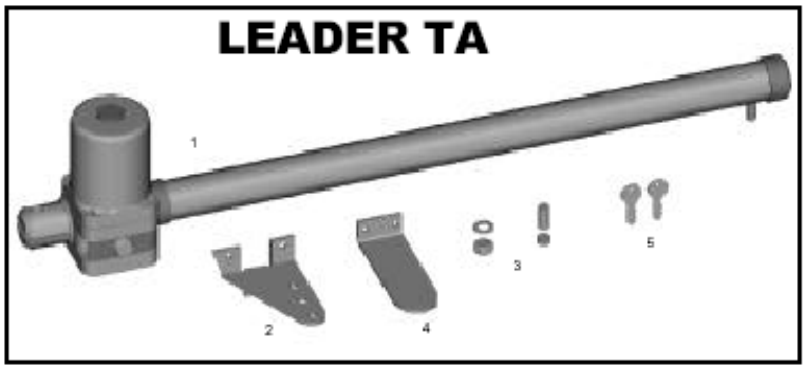
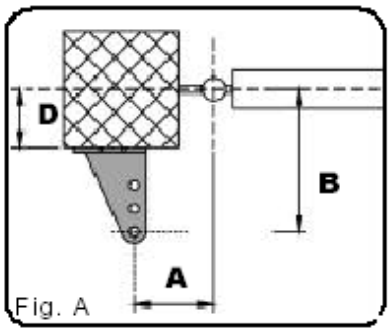
Composition

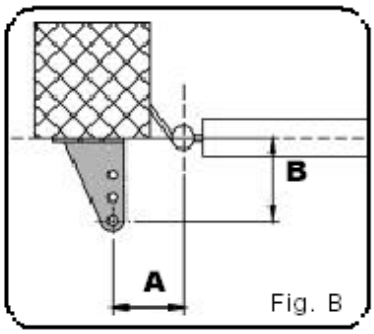


N°1-1- Actuator
N°1-2-S1 Bracket
N°1-3-Fixing kit
N°1-4-S3/S4 Bracket
N°2-5-Release key
N°1 Installation and use manual
N°1 General instructions manual

D	200 mm.	175 mm.	150 mm.	125 mm.	100 mm.	75mm.	50mm.
3TI	/ /	/ /	A= 98 B=202 S1	A=123 B=177 S1	A=148 B=152 S1	A=143 B=157 S1	A=168 B=132 S1
4 TI/TA	A= 148 B=252 S1	A= 173 B=227 S1	A= 198 B=202 S1	A=193 B=207 S1	A=218 B=182 S1	A=213 B=187 S1	A=205 B=195 S2

Actuators A=195 B=195





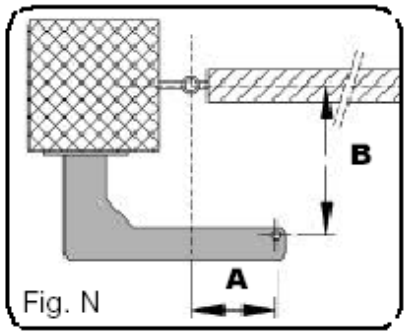


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Fig. C

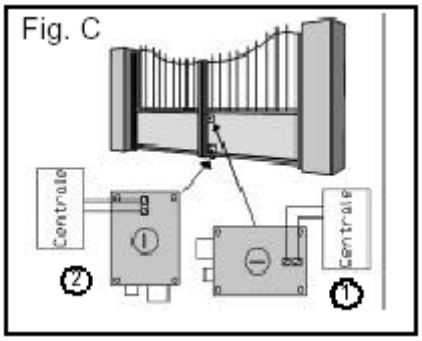


Fig. D

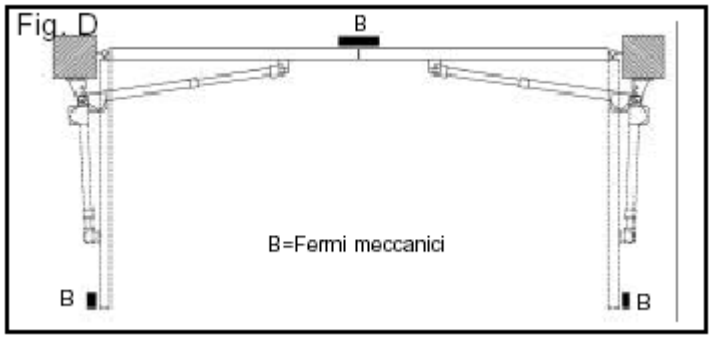


Fig. E

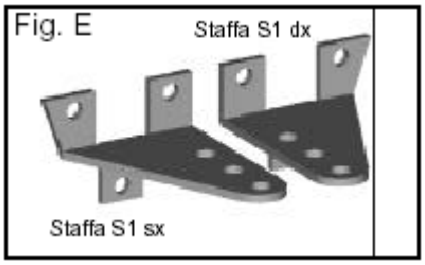
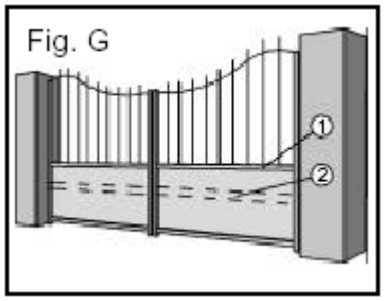


Fig. G



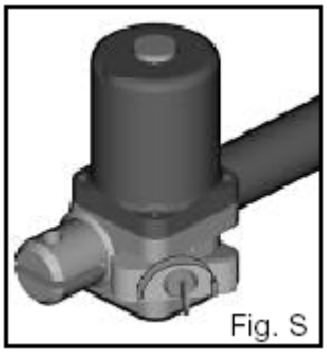


Fig. F

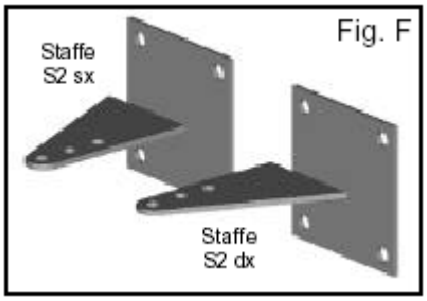
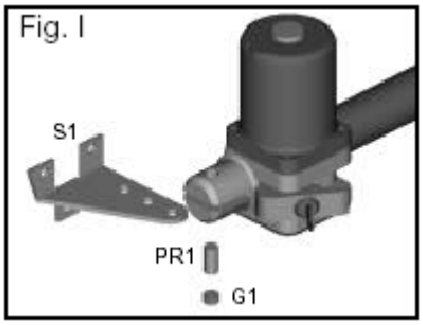
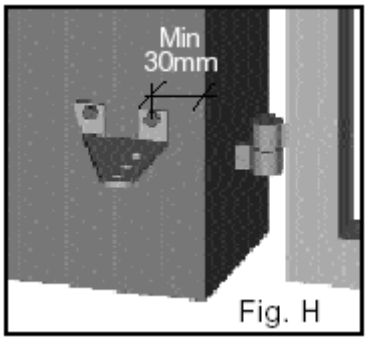


Fig. I





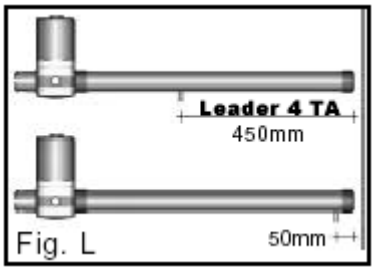


Fig. O

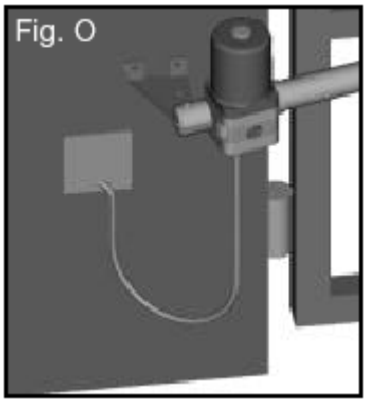


Fig. P

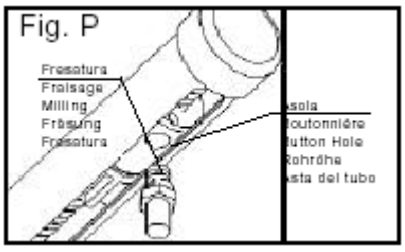
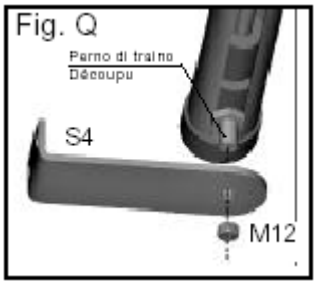


Fig. Q



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SAFETY CRITERIA

1. Attention : before beginning any kind of procedure of installation, it is absolutely necessary to read all this manual.
2. Test/Control that the performances of the actuator answer to your installation needs.
3. Besides control that :
   -the gate hinges are in good conditions and perfectly fattened.
   -the gate has mechanical stops in the opening and the closing.
   -the gate answers to the law UNI8612

INSTALLATION ADVICE

Connections:
-See the '***Scheme functional swing gate'*** and refer to the control central scheme.
-The electric cable in the exit from the actuator must be tight, but do an ample curve towards the bottom in order to avoid the reflux in the inside of the actuator itself (Fig.O)
-The adjustment must be effected when the device has no power supply.
-Foresee a omni polar breaking device near to the apparatus (the contact must measure at least 3mm). Always protect the power supply using a 6A automatic switch, or a 16A single-phase switch fises.
-The power supply lines the motors, to the control unit and the connection lines to the outfits must be separated to avoid troubles which could generate problems in the installation working.
-Any outfits (of control or safety) eventually connected to the control unit must be tension free.

Spare parts:
-Use exclusively original spare parts.
-Do not throw dead batteries away in normal household refuse but treat them as industrial garbage (law n. 475/88).

Installation:
-In order to correctly use the product and to exclude the possibility of injury or damage, refer to the **'*Generals'*** page enclosure, which is an integrated part of this manual.
-The use of this equipment must be in observance of the safety standards in force in the country where it is installed, as well as the standards governing proper installation.

Warranty:
-The warranty supplied by the manufacturer becomes void in the event of interference, carelessness, improper use, lightening damage, power surges or use by unqualified personnel.
-The warranty will also become void in the event of the following:
Failure to observe the instructions given in the manuals supplied with the product.
The application of any part in a manner differing from that provided for current legislation or the use of spare parts which are unsuitable and/or not approved by Nestor Company.

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-The manufacturer cannot be held responsible for damages due to improper or unreasonable use.

INSTALLATION INSTRUCTION SEQUENCE

1. Before the installation, analyse the risks referring to the chapter ***'Generalities'*** of this instructions manual, fill the technical table and eliminate the risks noticed. In case of more risks, foresee the installation with security system.
2. Test the security laws of the ***'Security Criteria'***.
3. Identify the right actuator and the left actuator.
4. Control all the components.
5. Identify the fixing point on the gate and then on the pillar.
6. Verify point **'D'**
7. Adapt the clamp **S1** or **S2** following **'Table 1'**.
8. Anchor the piston to the clamp **S1** or **S2**.
9. Unclamp the actuator.
10. Anchor the clamp **S3** or **S4** on the gate
11. Anchor the manina of the piston TI to the clamp **S3** or driving pivot of the piston **TA** to the clamp **S4**.
12. Stretch the wires as in the ***'Functional swing gate scheme'***.
13. Connect the central on all the accessories.
14. Program the radio receptors.
15. Program working times.

In case of bad working, see the ***'Anomalies and Consuls'***
If you do not find any solution, call the nearest assistance centre.

LOCKED ACTUATOR

The actuators may be either **locked**. Please notice that the electric lock must be installed on the wing that opens first and must be connected with the terminal board of the control unit.
Position of the electric lock : (Fig.C).
Position 1 : Lock between the wings
(in this case it is necessary to use the bolt **RT15** on the second wing).
Position 2 : Lock in the floor
(in this case the utilisation of the bolt is not essential).
Remember to remove the lock or at least block the lock in opening position and take away all the bolts of lock.

RIGHT OR LEFT ACTUATORS (FIG. D)

The actuators are supplied in **Right** or **Left** version.
Right or **Left** are established looking the gate from the side where the actuators are installed, if the hinges are on the right the actuator is right, if they are on the left the actuator is left.

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DETERMINATION OF FIXING MEASURES
Gate fixed in the middle of the pillar (Fig.A)

In this case the maximal opening corner of the gate is 90°.
-The correct functioning can be obtained putting the fixing brackets at the measures indicated in the table above picture A and B.
In the case that it will be difficult to realise, do as follows :
-Measure the **level D**
(distance between the hinges' axis and the pillar's edge)
-Look the **table 1** up and follow the correspondent line of the model of your operator until you cross the line correspondent **level D**.
-In the table, you can see the necessary indications and establish the most suitable use of the **bracket S1** (Fig.E) or alternatively **bracket S2** (Fig. F).
These quotes are calculated in order to obtain an average tangential speed that does not exceed of 12m/minute.

GATE FIXED ON THE EDGE PILLAR (Fig. B)

In this case the gate can open with a corner superior to 90° (max. 120°)
-The correct functioning for a **90°** degrees opening is obtained putting the brackets to the measures indicated in the table above picture **A** and **B**.
-To obtain that the wing will open with a bigger corner, it is necessary that **measure A** will be superior to **measure B**.
The best solution can be obtained increasing **measure A** of the same dimension of which must be diminished the **measure B**.

HEIGHT INSTALLATION

Calculate the height of the actuator installation according to the gate's shape and the fastening possibility (Fig. G).

a) if the gate has a big structure you can position it at any highness with no limits.
b) if the structure is light, it is necessary to put the operator as near as possible to the centre of the gate (in height).

Position 1 central beam of the gate
Position 2 stiffen of the gate

BRAKET FIXING

Bolt or weld the **bracket S1** or **S2** as explained at point 3 on the gate's side pillar, keeping in mind that the measures **A** and **B** refer to the gate hinges axis and to the actuator's rotation axis.
In case of fastening by expansion bolts, use ø 13mm, metal bolts and place the bolt at no less than 30÷35mm from the pillar's corner, to avoid any corner breaking (Fig.H). In case of masonry pillars, use chemical or resin bolts or a perfectly stoned bracket.

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-Be careful to the utilisation of the **bracket S1** (Fig.E) which disposes of two versions **bracket S1 right** and **bracket S1 left**, that should be used with its actuator; left or right.
-Fasten the actuator to **bracket S1** as indicated in 'Fig.I' remembering that the threaded hole of the rotating pivot **PR1** must be turned down.

BRACKETS S2 (Fig.F)

In some ways as indicated in table 1 and for particular installation, it is suitable to use **bracket S2.** Each bracket is composed of 1 a squared plate with dimensions 130x130x6mm, with 4 holes of ø12mm, and n°1 112x94x55mm, with 3 holes of ø12mm.
Instructions for setting up:
Screw the plate to the pillar with strong dowels
-To weld the bracket to the plate as indicated in fig.F
-Remember that the **measures A and B** are referred to the hinges axis of the gate and the rotation axis.

FRONT BRACKET'S FIXING

Operators (version with alu tube).
Determine the position of **bracket S4** as follows:
-Close the gate's wing.
-Unblock the actuator.
-Move forward the front pivot of the actuator until the position of limit bumper in opening. Turn back 10mm.
To avoid problems in closing, it is better to leave 10mm of air between the pivot and the actuator front side (Fig.L)
-Fasten **bracket S4** to the front pivot of the actuator as indicated in 'Fig.M' remembering that the threaded hole of the rotating pivot must be turned down and that the dragging pivot milling must be placed longitudinally to the button-hole to avoid problems in the installation working (Fig.P).
-Position the actuator on the gate's wing keeping it levelled and mark the position of **bracket S4** on the gate.
-Weld or bolt **bracket S4** to the gate.
-Control that the drag pin has been positioned with the two sides of the milling parallels to the button hole of the alu tube as indicated in the 'Fig.Q'.

MECHANICAL STOP (Fig.D)

At this point you need to position the mechanical stop to proceed, respectively, to the wing's closing and opening stop.
Operators (version with alu tube)
When the gate is closed the distance between the pivot of dragging and the front part of the actuator should be at the most of 450mm. When the gate is open this measure should be minimum of 50mm at least (Fig.L).

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EXTERNAL OPENING GATE

In case of external opening gate, it is possible to place the actuator towards the internal side. In this case, the **quote A** (distance between the axe of the hinges and the rotation axe of the actuator) has to be measured towards the centre of the gate. And it is necessary to modify the **bracket S2** to adapt it to the new fixing position (Fig.N).
In order not to reduce the length of the passage, the actuator can be positioned in the superior part of the gate at a highness uninferior of 2mt.
The position of the **front bracket** will be founded with the method indicated upon, but with the open wing of the gate.
Due to the motor's power, all the fastenings must be strong.

RELEASE OF THE ACTUATOR

-Insert the key (supplied in the kit) and rotate of 90° many times towards the centre of the gate (Fig.S).
-Pull the release lever towards the outside until the actuator is released, then rotate again the key of 90° to lock the lever.
-At this point the gate may be opened or closed manually.
-Do the inverse operation to clasp the actuator.
To link the actuator up turn in opposite direction the provided key.
It is not necessary that the gate is not in a specific position because to a next start will be restored all the previous value.

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