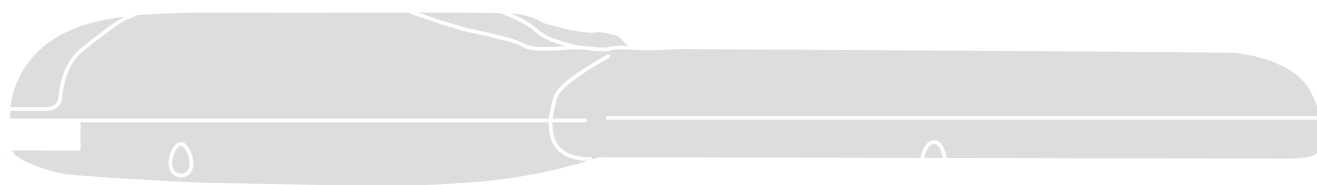


Wingo4024

CE

Swing gate opener



EN - Instructions and warnings for installation and use

Nice

1 GENERAL SAFETY WARNINGS AND PRECAUTIONS

Safety warnings

- **CAUTION!** – This manual contains important instructions and warnings for personal safety. Wrong installation can cause serious injuries. Before starting work read all the manual carefully. If in doubt, stop installation and ask the Nice Assistance Department for clarifications.
- **CAUTION!** – According to the most recent European legislation, the realisation of an automatic door or gate **must comply with the regulations of Directive 98/37/CE (Machine Directive)** and in particular, standards EN 12445; EN 12543; EN 12635 and EN 13214-1, which declare the presumed conformity of the automation. **In consideration of this, all the installation, connection, inspection and maintenance operations of the product must be performed exclusively by a qualified and competent technician!**
- **CAUTION!** – Important instructions: keep this manual for any possible future requirement for maintenance and disposal of the product.

Warnings for installation

- Before installing check if this product is suited to automating your gate or door (see chapter 3 and "Technical features of the product"). If unsuitable, DO NOT proceed with the installation.
- Include a disconnection device in the power supply system with an opening distance between the contacts to permit full disconnection in the conditions dictated by the category of surcharge III.
- **All the installation and maintenance operations must occur with the automation disconnected from the electrical power supply.** If the disconnection device of the power supply is not visible from the area where the automatism is located, before starting the work it is necessary to attach a sign with the text "CAUTION! MAINTENANCE IN PROGRESS" on the disconnection device.
- During installation handle the automatism with care avoiding crushing, knocks, falls or contact with liquids of any kind. Do not place the product near sources of heat, or expose it to naked flames. All these activities can damage and cause malfunctions or dangerous situations. If this occurs, stop the installation immediately and contact the Nice Assistance Department.
- Do not make alterations to any part of the product. Operations which are not permitted will cause only malfunctions. The manufacturer declines any liability for damage caused by arbitrary alterations to the product.
- If the gate or the door to be automated is fitted with a pedestrian door it is necessary to include a control system in the installation to prevent the operation of the motor when the pedestrian door is open.
- Check there are no trapping points towards fixed parts when the leaf of the gate is in the maximum *Open* position, if necessary protect these parts.
- The push button control on the wall must be positioned in sight of the automation, away from the moving parts, at a minimum height of 1.5 m from the ground and it must not be accessible to the public.
- The product packaging material must be disposed of respecting the local regulations in force.

2 DESCRIPTION OF THE PRODUCT AND ENVISAGED USE

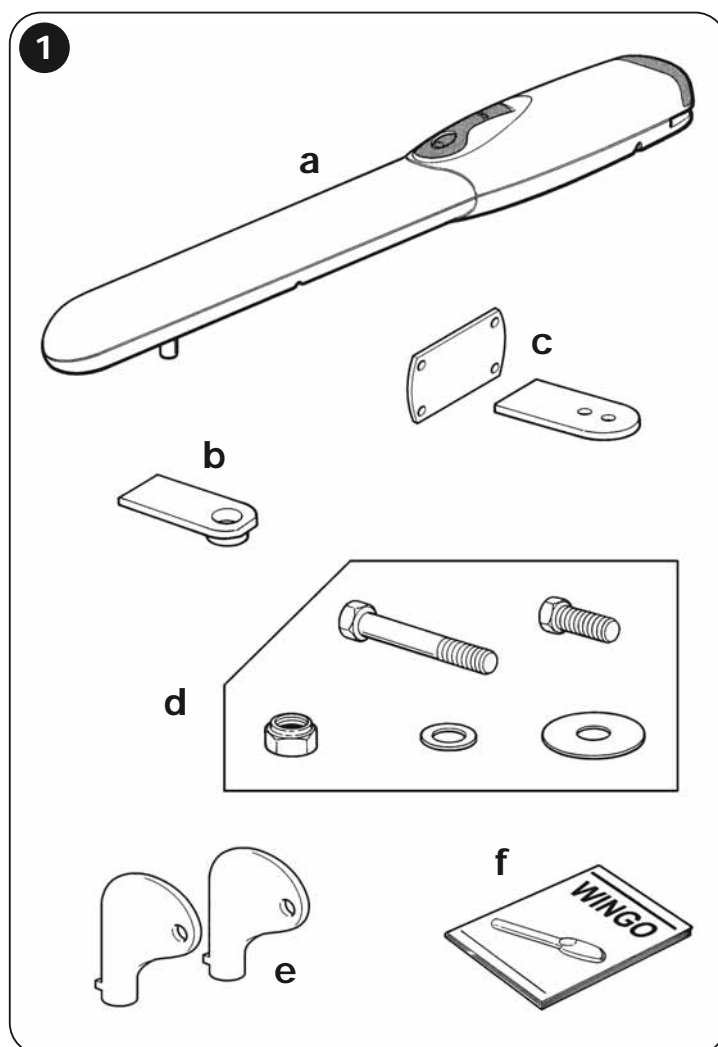
This product is intended to be used for automating swing gates or doors in an exclusively residential context. **CAUTION!** – Any other use different to that described and in ambient conditions different to those set out in this manual is to be considered improper and forbidden!

The product is an electromechanical gear motor, equipped with a 24 v continuous current and an endless screw reduction gear.

The gear motor is powered by the external control unit to which it is connected. In the event of a black out, it is possible to move the gate leaves by hand, unblocking the gear motor manually.

Fig. 1 shows all the components provided in the package (according to the model chosen):

- [a] - electromechanical gear motor
- [b] - front bracket (for fixing the gear motor to the gate leaf)
- [c] - rear bracket and plate (for fixing the gear motor to the wall)
- [d] - metal parts (screws, washers, etc.)
- [e] - keys to manually unlock the gear motor
- [f] - Instructions and warnings for installation and use



3 INSTALLATION

3.1 - Checks before installation

Before installation, check the integrity of the components, suitability of the model chosen and suitability of the environment chosen for the installation.

IMPORTANT – The gear motor cannot automate a manual gate which does not have a safe and efficient mechanical structure. Furthermore, it cannot solve the faults caused by wrong installation or bad maintenance of the gate itself.

3.2 - Suitability of the gate to being automated and the surrounding environment

- Check the mechanical structure of the gate is suited to being automated and conforms to the national laws in force (if necessary make reference to the data on the gate label).
- Moving the gate leaf manually in Open and Close position, check the movement occurs with equal and constant attrition at each point of the stroke (there must be no moments of greater effort).
- Check the gate leaf remains balanced, that it does not move if brought manually to any position and left stopped.
- Check the space around the gear motor allows to manually unblock the gate leaf, easily and safely.
- Check the surfaces chosen for installing the product are solid and can guarantee stable fixing.
- Check the fixing zone of the gear motor is compatible with the size of the latter, see fig. 2: the correct *Opening* movement of the gate and the force the motor exerts to perform it, depend on the position in which the rear fixing bracket is secured. Therefore, before installing it is necessary to make reference to **graph 2** to define the maximum *Opening* angle of the leaf and the force of the motor, suited to the individual system.

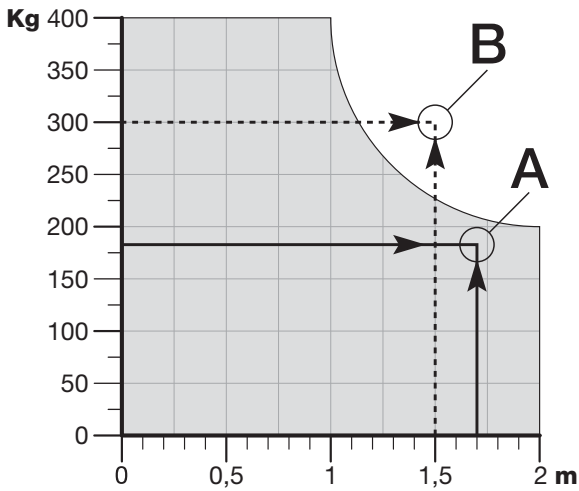
3.3 - Limits of use of the product

Before installing the product, check the gate leaf is the right size and weight and falls within the limits shown in **graph 1**.

3.4 - Preparing for installation

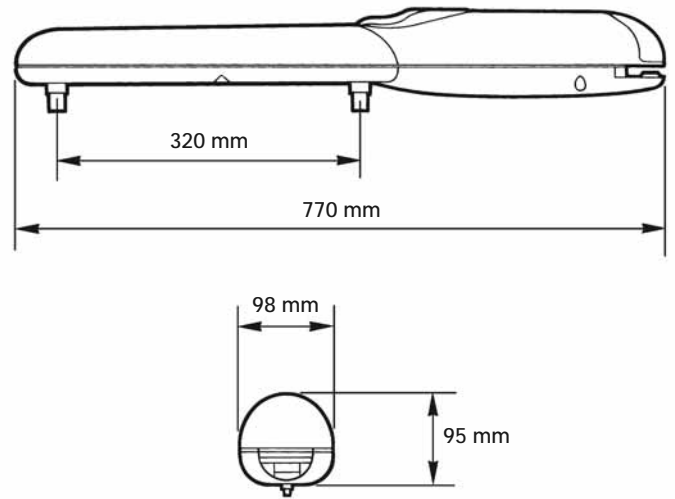
Fig. 3 shows an example of an automation system designed with Nice components. These components are positioned according to a typical and usual scheme.

GRAPH 1 - Limits of use of the product

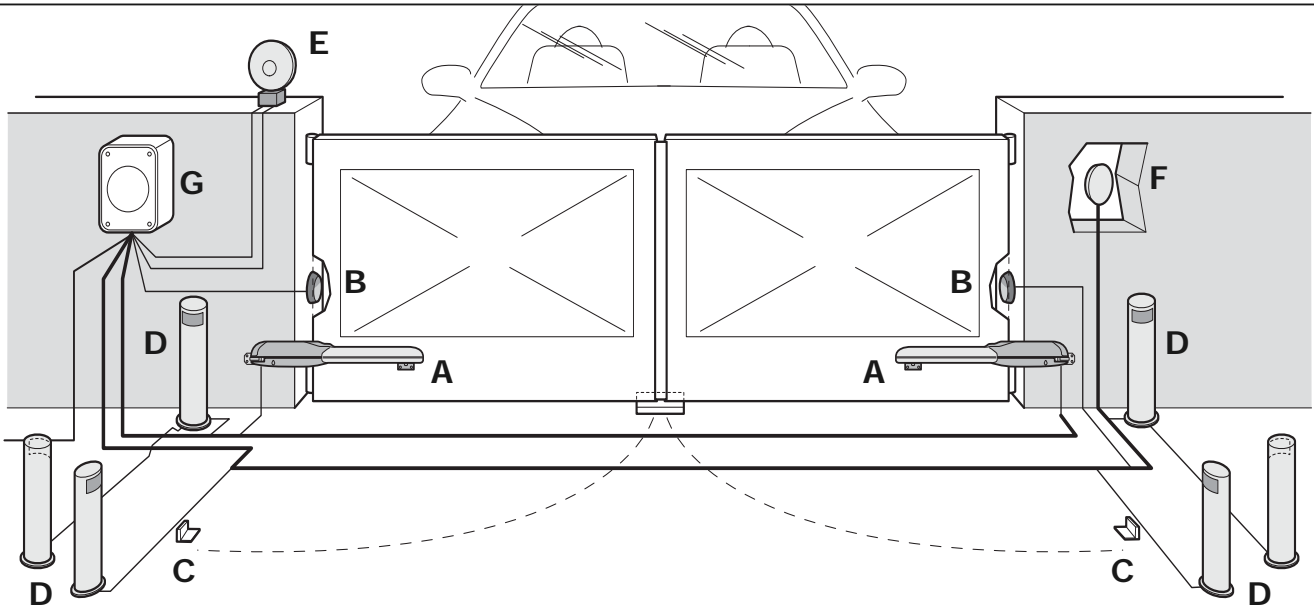


kg: Maximum weight of the gate leaf
m: Maximum length of the gate leaf

2



3



Making reference to **fig. 3**, decide the approximate position in which to install each component envisaged by the system and the most appropriate connection diagram.

Useful components for producing a complete system (fig. 3):

- A - Electromechanical gear motors
- B - Couple of photocells
- C - Couple of stop blocks (in Opening)
- D - Columns for photocells
- E - Flashing signalling device with incorporated antenna
- F - Key selector switch or digital keypad
- G - Control unit

3.5 - Installation of fixing brackets and gear motor

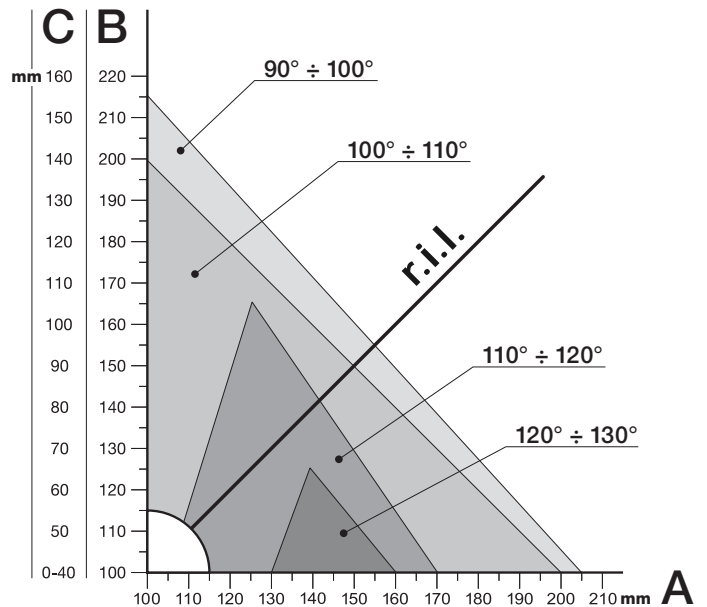
3.5.1 - Installation of rear fixing bracket

Calculate the position of the rear bracket using **graph 2**. This graph serves to establish **dimensions A and B** and the value of the **maximum opening angle** of the leaf. **Important** - The values of **A and B** must be similar to allow linear movement of the automation.

01. Measure **dimension C** (fig. 4 / 6) on the fixing side;
02. On **graph 2**, identify **dimension C** found and trace a **horizontal line** that determines the value of **dimension B** (*) as shown in the example of **fig. 5**; the meeting point with line "r.i.l." (installation line recommended) determines the value of the **angle of maximum opening**. From this point, trace a **vertical line** as shown in the example of **fig. 5** to determine the value of **dimension A**. If the angle found does not correspond to the requirements, adapt **dimension A** and if necessary **dimension B**, so they are similar.
03. Before being fixed to the wall the bracket must be sealed to the specific fixing plate (**fig. 7**); if necessary the bracket can be cut adapting values of di-

GRAPH 2

r.i.l. = recommended installation line



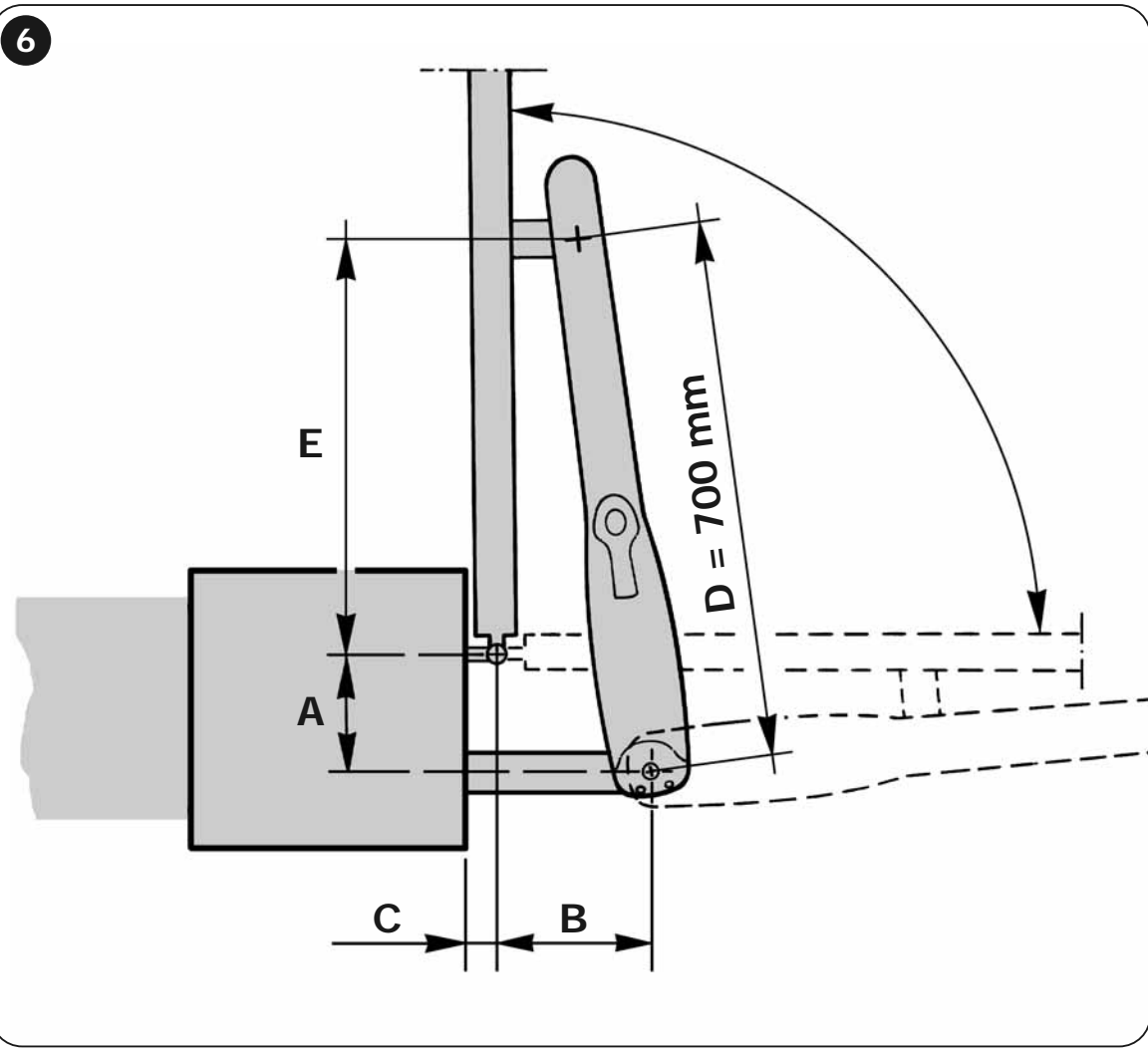
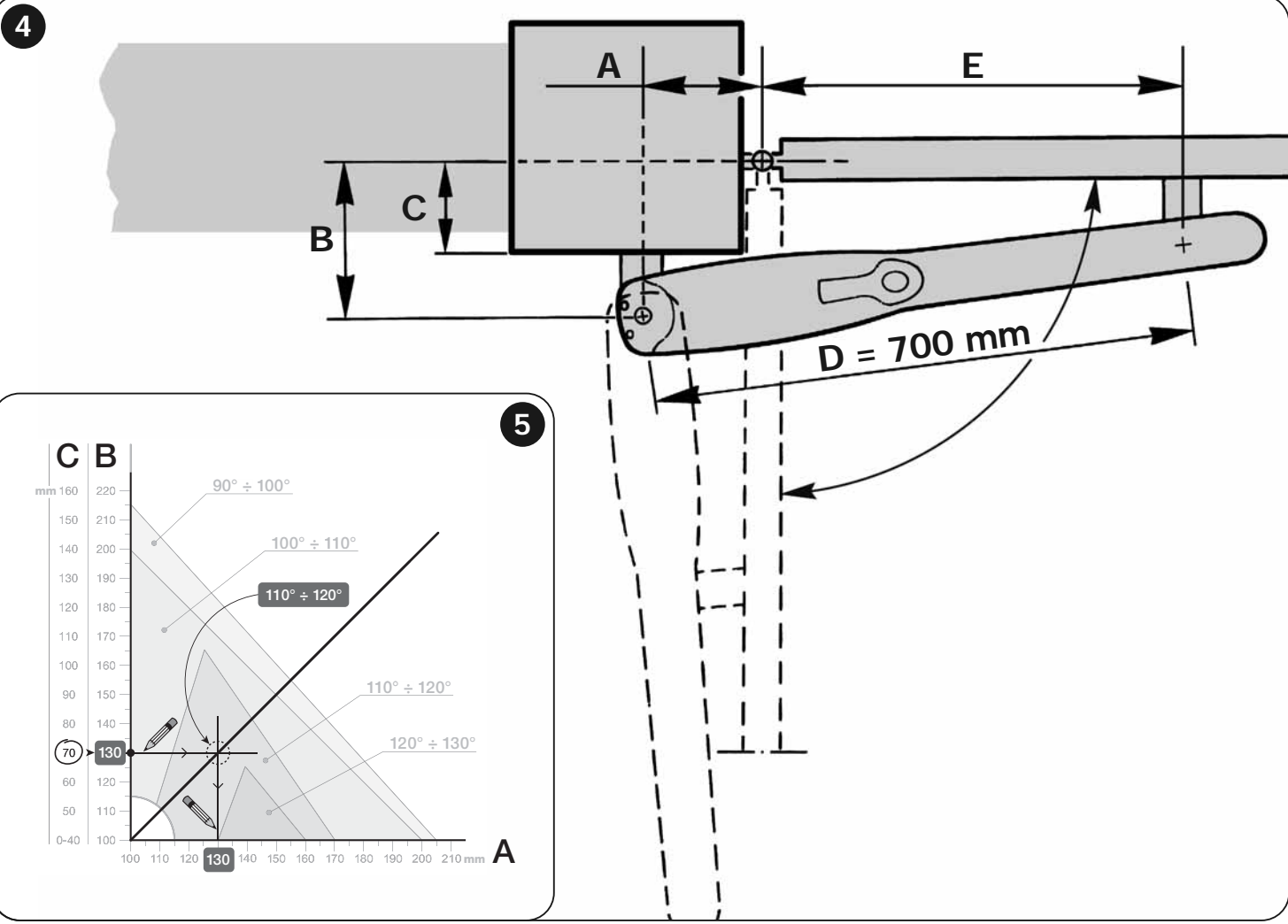


TABLE 1

A (mm)	E (mm)
100	600~
110	590~
120	580~
130	570~
140	560~
150	550~
160	540~
170	530~
180	520~
190	510~
200	500~
210	490~
220	480~
230	470~

mensions A and B.

Note – The rear bracket provided with the gearmotor has a length of 150 mm; in the case of special applications or an outward opening gate (fig. 6) the bracket model PLA6 (optional accessory) may be used.

CAUTION! – Before securing the rear bracket, check the fixing zone of the front bracket is in a solid part of the leaf, as this bracket must be fixed at a different height of the rear bracket (fig. 8).

04. At this point, fix the bracket using dowels, screws and washers required (not supplied).

3.5.2 – Installation of front fixing bracket

The front bracket provided with the gearmotor must be welded directly onto the gate leaf. If this is not possible, use the bracket model PLA8 (optional accessory).

01. With reference to value A as obtained from procedure 3.5.1, identify the same value in the first column on table 1; thus, read the corresponding value E.
 02. On the leaf report the E and temporarily position the bracket in correspondence to this value; **IMPORTANT** – ensure that the distance between the two rotation pins (i.e. the D shown in fig. 4 / 6) is 700 mm. If necessary correct the E by moving the bracket on the leaf until the length of 700 mm for the D is obtained.
 03. Establish the height in which to position the front bracket, referring to fig. 8;
 04. Fix the bracket to the solid part of the gate leaf.

3.5.3 – Installation of the gear motor on the fixing brackets

• Installing the gear motor on the rear bracket:

01. Fix the gear motor to the bracket as shown in fig. 9 using the screw, washer and nut supplied;
 02. Tighten the nut to the end and then loosen by 1/10 of a turn to allow mini-

mum clearance between the parts.

• Installing the gear motor on the front bracket:

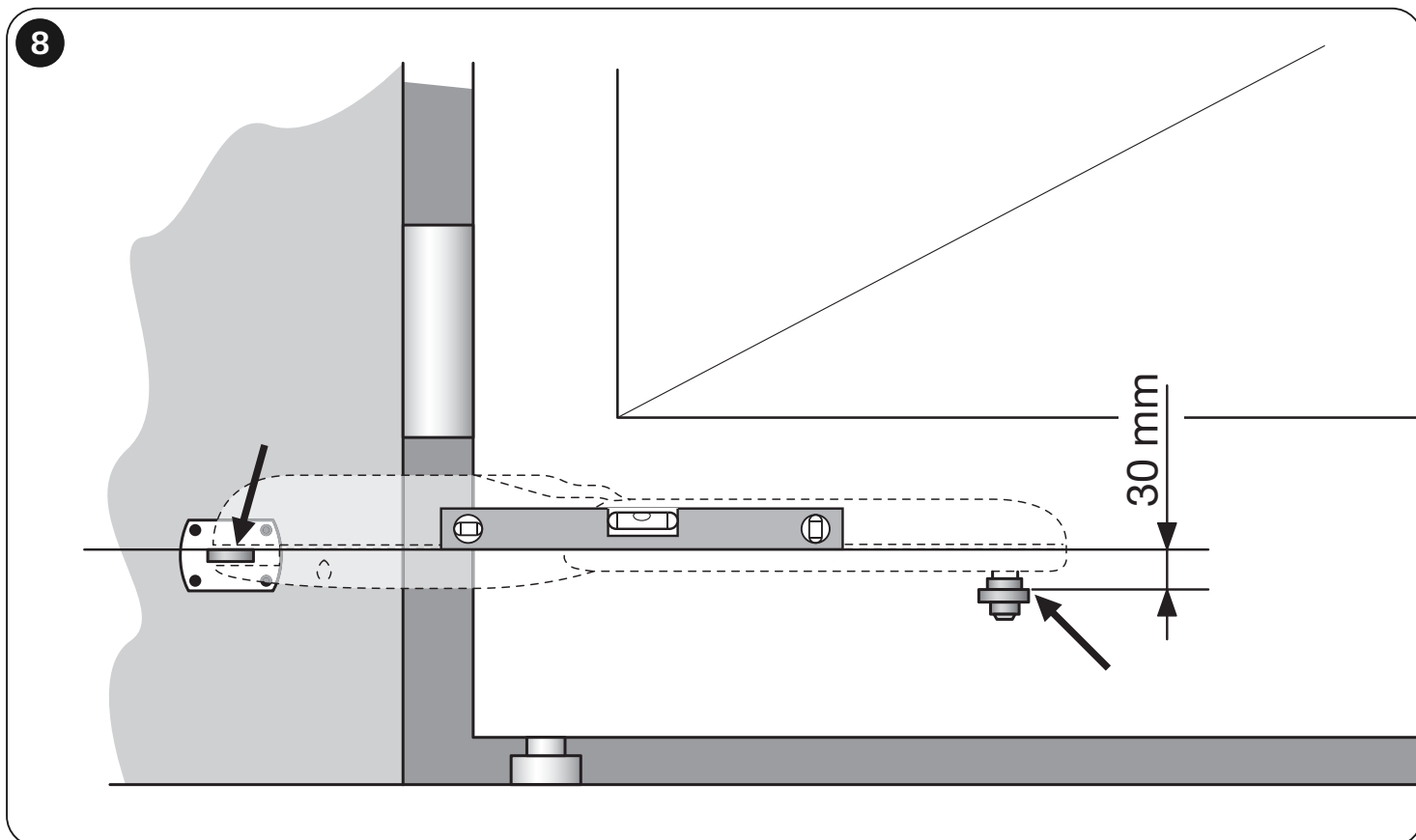
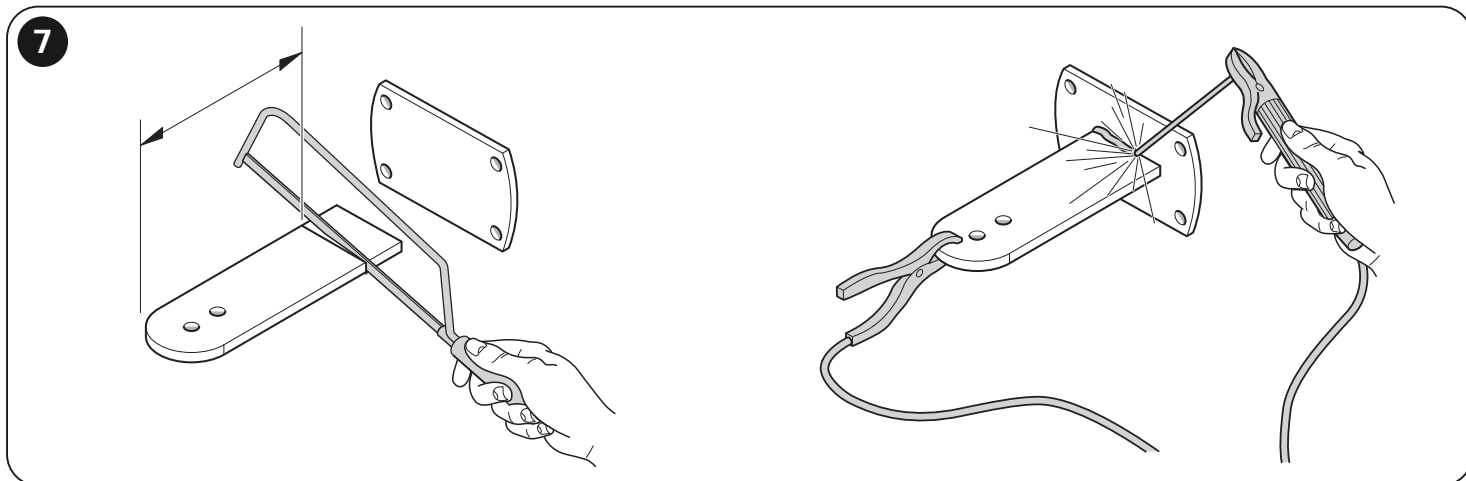
01. Fix the gear motor to the bracket as shown in fig. 10 using the screw, washer and nut supplied;
 02. Tighten the screw to the end.
 03. Fix the label provided in the package, dealing with the unblocking and blocking operations of the gear motor, permanently close to the gear motor.

3.6 - Setting the mechanical limit switch

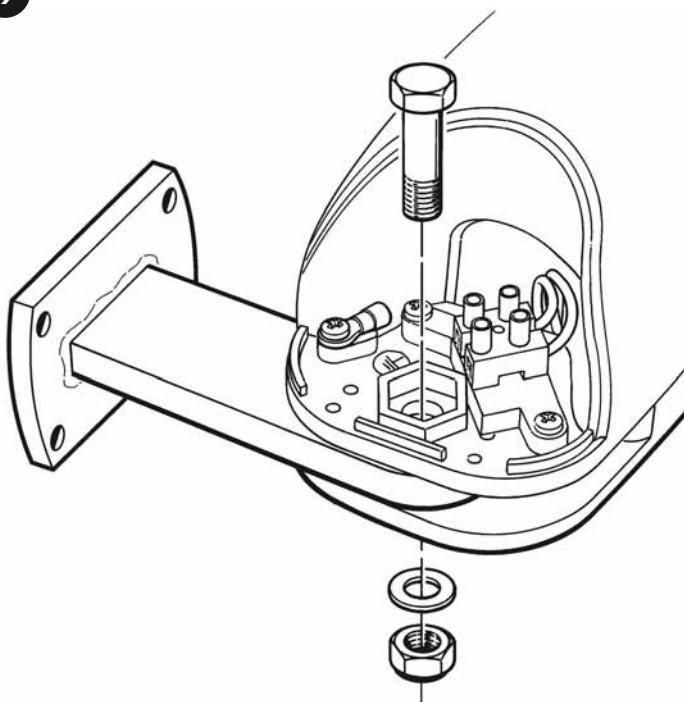
The mechanical limit switch allows to set the stop position of the gate leaf, in this way, it is not necessary to use the stop blocks and the leaf does not hit against these at the end of the manoeuvre.

WARNING – In the event of applications with a gate equipped with opening towards the outside (fig. 6) it is necessary to invert the power supply wires. Set the limit switch in Opening of the gear motor as follows:

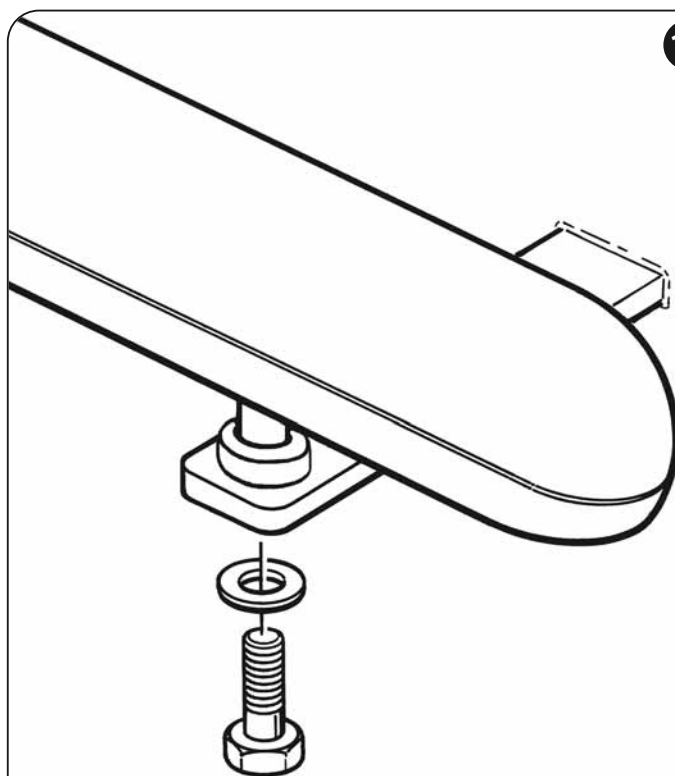
01. Unblock the gear motor as shown in fig. 14;
 02. Loosen the mechanical stop screw;
 03. Bring the gate leaf manually to the *Open* position required;
 04. Then, bring the mechanical stop to the end of the pin and block the screw (fig. 11).
 05. Bring the leaf manually to the *Close* position and block the gear motor.



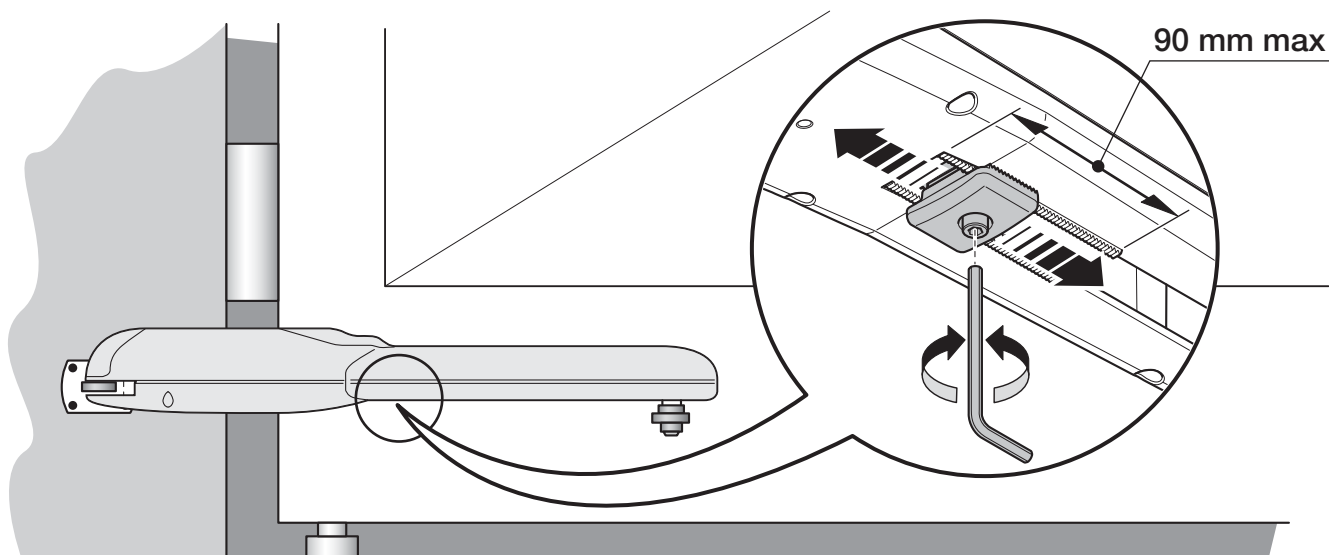
9



10



11



4 ELECTRICAL CONNECTIONS

CAUTION!

- A wrong connection can cause faults or danger; therefore follow scrupulously the connections set out.
- Perform the connection operations when the electricity is off.

To connect the gear motor to the control unit, proceed as follows:

01. Remove the lid of the gear motor as shown in fig. 12;
02. Slacken the gearmotor cable clamp, thread the connecting cable through the hole and connect the three electric wires as shown in fig. 13;
03. Replace lid on gear motor.

To check the connections, direction of rotation of the motor, phase shift in the movement of the leaves and setting the limit switch, refer to the instructions manual of the control unit.

IMPORTANT – With a gate configured with opening towards the outside invert the power supply wires with respect to the standard installation.

5 INSPECTING THE AUTOMATION

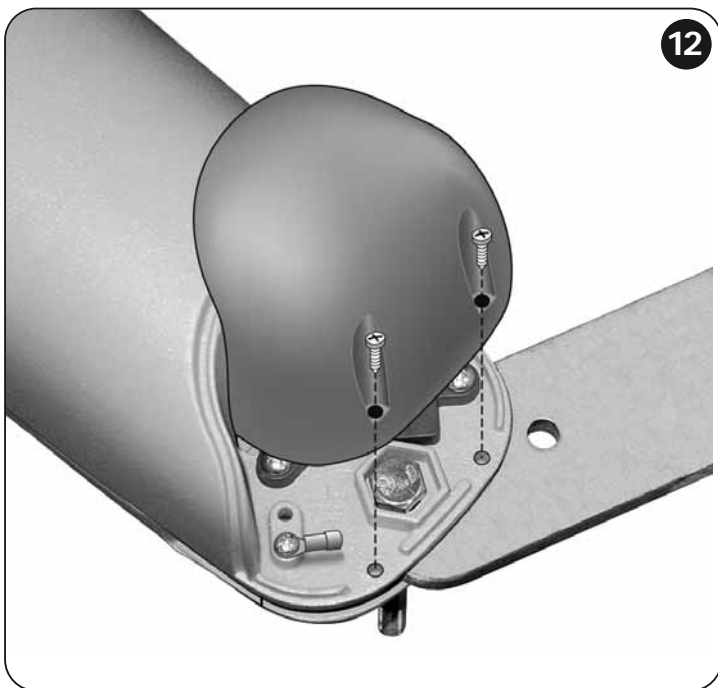
This is the most important phase in realising the automation to guarantee maximum safety. The inspection can be used also to periodically check the devices which make up the automatism.

The inspection of the entire system must be performed by expert and qualified staff who must take responsibility of the tests requested, depending on the risk involved and to check compliance of what is set out by laws, rules and regulations and in particular all the requirements of regulation EN 12445 which establishes the testing methods to verify gate automatisms.

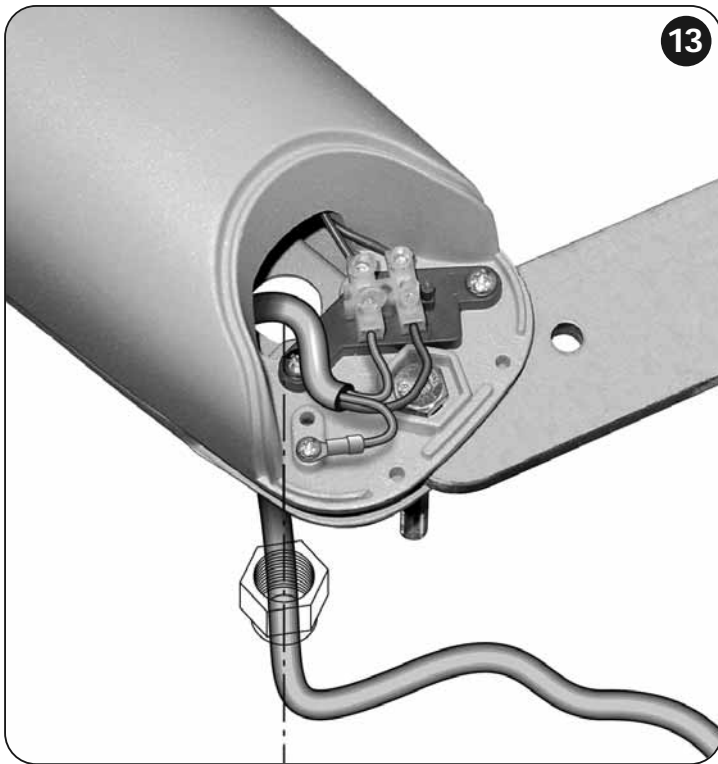
• Inspection

Each single component of the automatism, for example sensitive edges, photocells, emergency shutdowns, etc. requires a specific inspection phase; for these devices follow the procedures shown in the respective instruction manuals. For inspection of the gear motor follow the operations below:

01. Check that everything in this manual and in particular in chapter 1 has been rigorously complied with;
02. Unblock the gear motor as shown in fig. 14;
03. Check it is possible to manually move the leaf when opening and closing with a force no greater than 390N (approx. 40 kg);
04. Block the gear motor and connect the electrical power supply;



12



13

05. Using the control or shutdown devices envisaged (key selector switch, control buttons or radio transmitters), perform a number of opening, closing and stopping tests of the gate and check it behaves as it should;
06. Check the correct operation of all the safety devices one by one in the system (photocells, sensitive edges, emergency shutdown, etc.) and check the gate behaves as it should;
07. Command a closing manoeuvre and check the force of the impact of the leaf against the end of the mechanical limit switch. If necessary, try to unload the pressure, finding a setting which gives better results;
08. If the dangerous situations caused by the movement of the leaf have been protected by limiting the force of impact the force must be measured as required by regulation EN 12445.

Note – The gear motor is not provided with torque setting devices, such regulations are done by the Control unit.

• Putting into operation

This can occur only after having performed, with positive results, all the inspection phases of the gear motor and other devices present. To put it into operation refer to the instructions manual of the control unit.

IMPORTANT – It is forbidden to put into partial or provisional operation.

6 PRODUCT MAINTENANCE

To keep the level of safety consistent and to guarantee maximum life of the entire automation it is necessary to maintain it regularly. The maintenance must be performed in line with the safety instructions of this manual and according to what is set out by the laws and regulations in force. For the gear motor a programmed maintenance within no more than 6 months is required.

Maintenance operations:

01. Disconnect any sources of electricity.
02. Check the status of deterioration of all the materials which make up the automation with particular attention to signs of erosion or oxidation of the structural parts: replace the parts which do not provide sufficient guarantees.
03. Check the screw connections are sufficiently tight.
04. Check the bolt and endless screw are suitably greased.
05. Check the wear of the moving parts and, if necessary, replace used parts.
06. Reconnect the sources of electrical power and perform all the tests and checks envisaged in chapter 5.

For the other devices present in the system refer to the individual instruction manuals.

DISPOSAL OF THE PRODUCT

This product is an integral part of the automation, and therefore, they must be disposed of together.

As for the installation operations, at the end of the life of this product, the dismantling operations must be performed by qualified personnel.

This product is made from different types of materials: some can be recycled, others must be disposed of. Please inform yourselves on the recycling or disposal systems provided for by the laws in force in your area, for this category of product.

CAUTION! – some parts of the product can contain polluting or dangerous substances which, if dispersed in the environment, may cause serious harm to the environment and human health.

As indicated by the symbol at the side, it is forbidden to throw this product into domestic refuse. Therefore, follow the "separated collection" instructions for disposal, according to the methods provided for by local regulations in force, or redeliver the product to the retailer at the moment of purchase of a new, equivalent product.



CAUTION! – the regulations in force at local level may envisage heavy sanctions in case of abusive disposal of this product.

TECHNICAL FEATURES OF THE PRODUCT

CAUTIONS: • The technical features set out refer to an ambient temperature of 20°C (± 5°C). • Nice S.p.a. reserves the right to make alterations to the product any time it deems it necessary, keeping the same functionality and destination of use.

Type: electromechanical gear motor for gates or doors with leaf opening

Power input: 24 V

Maximum absorption: 3,5 A

Nominal absorption: 2 A

Maximum absorbed power: 85 W

Nominal absorbed power: 50 W

Protection grade: IP 44

Travel: 320 mm

Speed loadless: 0,018 m/s

Speed loaded: 0,013 m/s

Maximum thrust: 1500 N

Nominal thrust: 500 N

Operating temperature: -20 °C to +50 °C

Cycles h at nominal torque: 40

Durability: estimated between 80,000 and 250,000 cycles of manoeuvres according to the conditions set out in Table 2

Insulation class: A

Dimensions (mm): 770 x 98 x 95 h

Weight (kg): 6

DURABILITY OF THE PRODUCT

Durability is the average economic life of the product. The value of durability is strongly influenced by the demand index of the manoeuvres performed by the automatism: that is the sum of all the factors which contribute to the wear of the product (see **Table 2**).

To establish the probable durability of your automatism proceed as follows:

01. Calculate the demand index summing the values in percentage of the entries present in **Table 2** to each other.

Example:

- leaf weight = 200 Kg (demand index = 20%)

- leaf length = 1,5 m (demand index = 20%)

- no other stress elements present

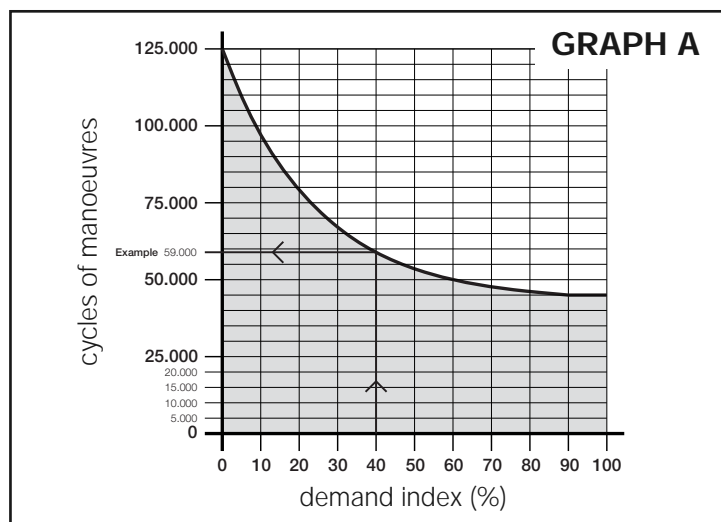
Total demand index = 40%

	Demand index	
Leaf weight:	> 100 Kg	10 %
	> 200 Kg	20 %
	> 300 Kg	30 %
	> 400 Kg	-
Leaf length:	(1 ÷ 2 m)	20 %
Operating temperature:		20 %
Blind leaf:		15 %
Installation in windy area:		15 %

02. In **Graph A**, from the value just found, trace a vertical line until you intersect the curve; from this point trace a horizontal line to cross the line of "cycles of manoeuvres". The value established is the estimated durability of your product.

Example:

Total demand index = 40% → Durability estimate = 59.000 cycles of manoeuvre.



Warnings – The estimate of durability is performed on the basis of the design calculations and the results of tests carried out on prototypes. In fact, being an estimate, it does not give any guarantee on the actual duration of the product.

CE declaration of conformity and declaration of incorporation of "quasi-machine"

Declaration in accordance with Directives: 2004/108/EC (EMC);
2006/42/EC (MD) annex II, part B

Note: The content of this declaration corresponds to declaration made in the official document filed in the offices of Nice S.p.a., and particularly the latest version thereof available prior to the printing of this manual. The text herein has been re-edited for editorial purposes. A copy of the original declaration may be requested from Nice S.p.a. (TV) I.

Declaration number: **462/WINGO4024**

Revision: **0**

Language: **IT**

Name of manufacturer: NICE S.p.A.;

Address: Via Pezza Alta N°13, 31046 Rustignè di Oderzo (TV) Italy;

Person authorized to provide technical documentation: Mr. Oscar Marchetto;

Address: Via Pezza Alta N°13, 31046 Rustignè di Oderzo (TV) Italy;

Product type: 24 V D.C. electromechanical gearmotor for swing gate;

Model / Type : Wingo4024;

Accessories: none.

The undersigned Luigi Paro, as Managing Director, hereby declares under his own responsibility that the product identified above complies with the provisions of the following directives:

- DIRECTIVE 2004/108/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of December 15 2004 concerning alignment of Member States' legislation regarding electromagnetic compatibility and abrogating directive 89/336/EEC, according to the following harmonized standards: EN 61000-6-2:2005, EN 61000-6-3:2007.

The product also complies with the following directive in accordance with the requirements for "quasi-machines":

- Directive 2006/42/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of 17 May 2006 regarding machines and amending directive 95/16/EC (consolidated text).
 - I declare that the pertinent technical documentation has been prepared in accordance with Annex VII B to Directive 2006/42/EC and that the following essential requirements have been met: 1.1.1- 1.1.2- 1.1.3- 1.2.1-1.2.6- 1.5.1-1.5.2- 1.5.5- 1.5.6- 1.5.7- 1.5.8- 1.5.10- 1.5.11.
 - The manufacturer agrees to send the national authorities pertinent information on the "quasi-machine" in response to a motivated request without affecting its intellectual property rights.
 - If the "quasi-machine" is operated in a European country with an official language other than the language used in this declaration, the importer must associate a translation with this declaration.
 - The "quasi-machine" must not be operated until the final machine in which it is to be incorporated is declared to conform to the provisions of Directive 2006/42/EC, if applicable to it.

The product also complies with the following standards: EN 60335-1:2002 + A1:2004 + A11:2004 + A12:2006 + A2:2006 + A13:2008 + A14:2010, EN 60335-2-103:2003

The parts of the product which are subject to the following standards comply with them: EN 13241-1:2003, EN 12445:2002, EN 12453:2002, EN 12978:2003.

Oderzo, 13.06.12

Mr. Luigi Paro
(Managing Director)

OPERATION MANUAL

Instructions and cautions for the user

Before using the automation for the first time, have the fitter explain the origin of the residual risks, and dedicate a few minutes of your time to reading the instructions manual and cautions for the user provided by the fitter. Keep the manual for any future doubt and deliver it to any new proprietor of the automation.

CAUTION! –Your automation is a machine which faithfully performs your commands; a wrong or improper use will make it dangerous:

- Do not command the movement of the automation if people, animals or things are within its range of action.
- It is totally forbidden to touch parts of the automation while the gate or door is moving!
- Transit is allowed only if the gate or door is completely open with the leaves stopped!

• **Children:** an automation system guarantees a high level of safety, preventing the movement in the presence of people or things with its detection systems, and guaranteeing an always predictable and safe activation. It is any case prudent to forbid children to play close to the automation and, to avoid accidental activations, do not leave the remote control within their reach: it is not a toy!

• The product is not designed to be used by people (including children) whose physical, sensorial, or mental abilities are reduced, or those without experience or knowledge, unless they have been able to benefit, through intermediation of a person responsible for their safety, of supervision or instructions regarding the use of the product.

• **Anomalies:** As soon as you notice some anomalous behaviour by the automation, cut off the power to the system and unblock it manually. Do not attempt to perform any repair work, but ask the assistance of your trusted fitter: meanwhile the system can work as an unautomated opening, once the gear motor has been unblocked as described below.

• **Maintenance:** As with each machine your automation needs periodic maintenance so that it can function as long as possible and in complete safety. Agree a periodic maintenance plan with your fitter: Nice recommends maintenance every 6 months for normal domestic use, but this period may vary depending on the intensity of use: Any control, maintenance or repair work must be performed by qualified personnel.

• Even if you consider yourself able to perform the work, do not modify the system and the programming parameters or adjust the automation: it is the responsibility of the fitter.

• The inspection, periodic maintenance work and any repairs must be documented by the person who performs them and these documents must be kept by the owner of the system. The only work you can perform and which we recommend doing periodically is cleaning of the glass of the photocells and the removal of any leaves or stones which may obstruct the automatism. To prevent someone activating the gate, before proceeding, remember to unblock the automatism (as described below) and to clean it only with a sponge slightly dampened in water.

• **Disposal:** At the end of the life of the automation, ensure it is dismantled by qualified personnel and that the materials are recycled or disposed of according to local regulations in force.

• In the event of breakage or black out: As you await for the fitter to perform the work or for the electricity to return if the system is not equipped with buffer batteries, the automation can still be used. It is necessary to manually unblock the gear motor (see "Unblocking or blocking the gear motor") and move the gate leaf manually as required.

UNBLOCKING AND BLOCKING THE GEAR MOTOR MANUALLY

The gear motor is equipped with a mechanical system which allows to open and close the gate manually. These operations must be performed during electrical black outs or operating anomalies.

IMPORTANT! – The gear motor must only be blocked or unblocked when the leaf is stopped.

If there is an electric lock on the automation ensure the electric lock is unlocked before moving the leaf.

UNBLOCKING the gear motor manually (fig. 14):

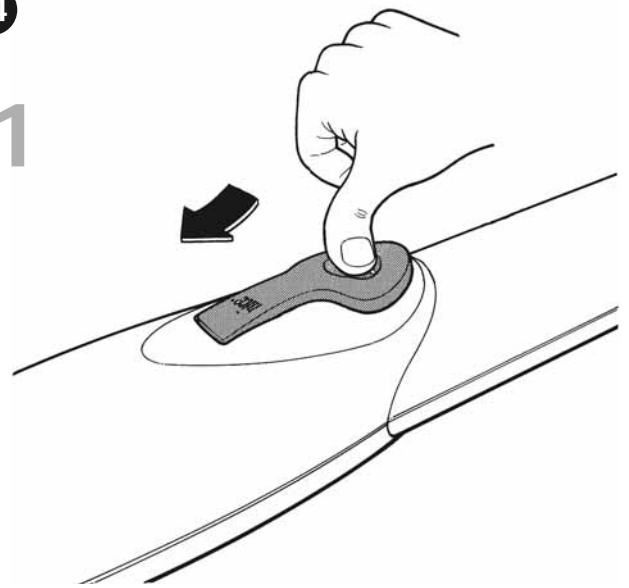
01. Slide the protection membrane and insert the key turning it clockwise;
02. Pull the handle upwards, accompanying it;
03. At this point, manually move the gate leaf in the position desired.

BLOCKING the gear motor manually (fig. 14):

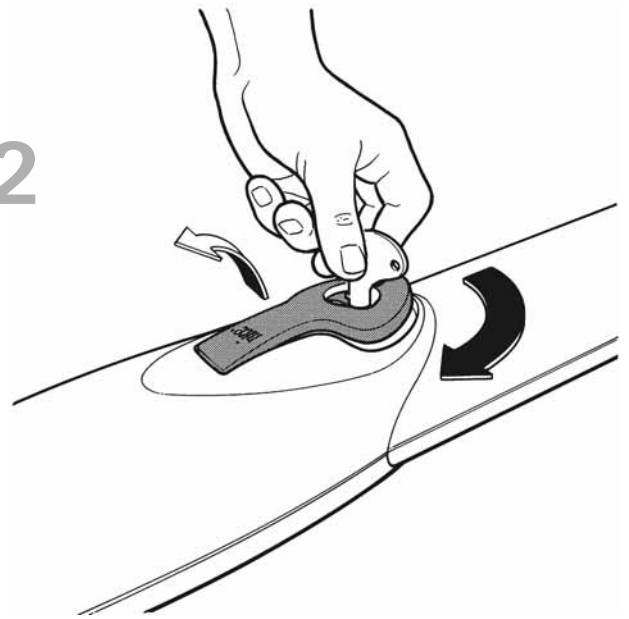
01. Close the handle and turn the key anti-clockwise;
02. Remove the key and close the protection membrane.

14

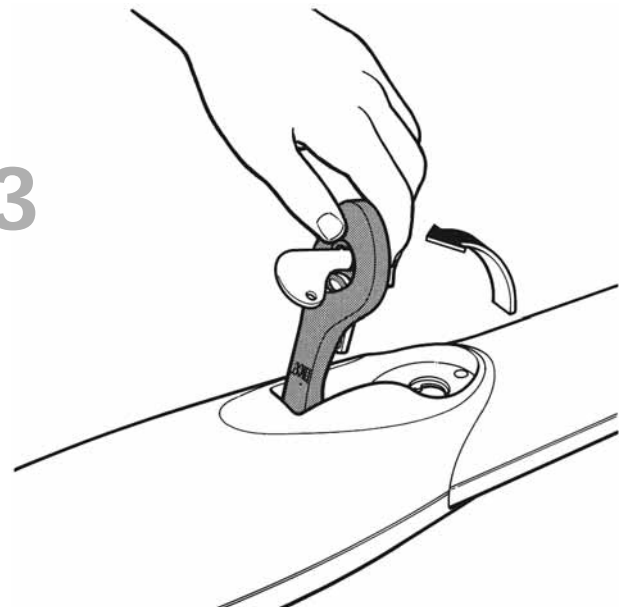
1



2



3







Nice

Nice SpA
Oderzo TV Italia
info@niceforyou.com

www.niceforyou.com

IS0191A00EN_15-07-2012