

**gearmotor  
for swing gates**



# moby

**Instructions and warnings for the fitter**

**Istruzioni e avvertenze per l'installatore**

**Instructions et recommandations pour l'installation**

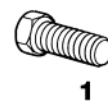
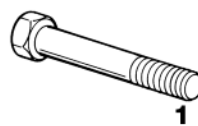
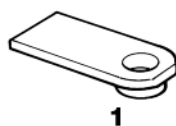
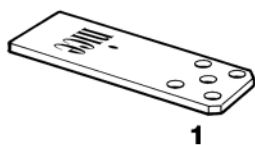
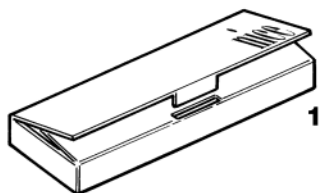
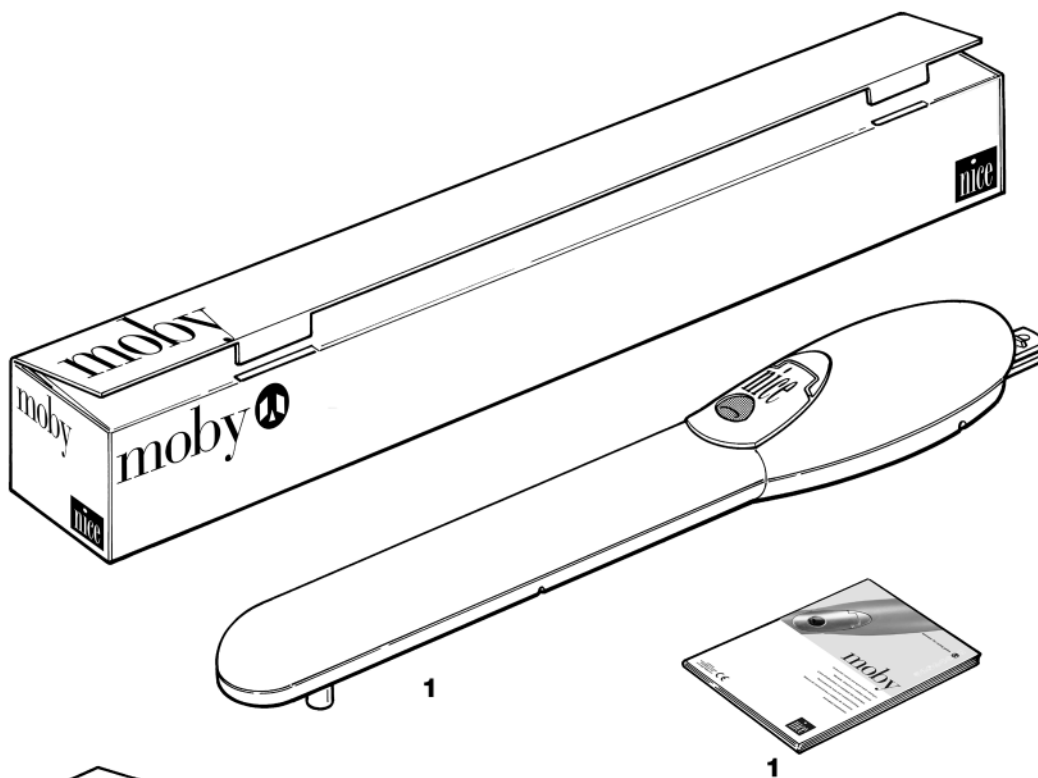
**Anweisungen und hinweise für den installateur**

**Instrucciones j advertencias para el instalador**

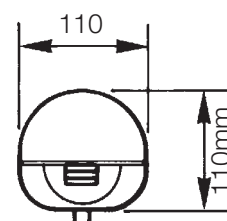
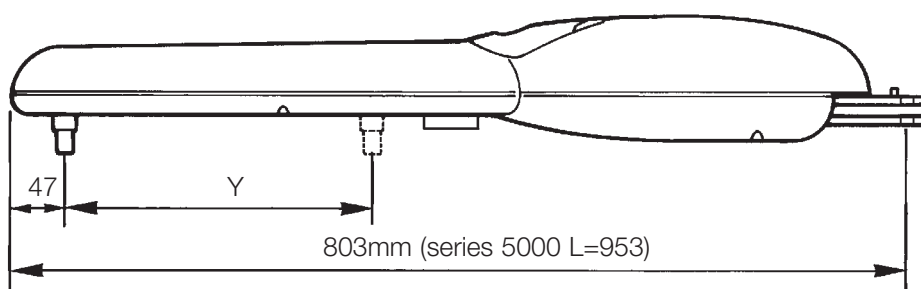
**Instrukcja dla instalatora**

COMPANY  
WITH QUALITY SYSTEM  
CERTIFIED BY DNV  
== ISO 9001 ==





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## Important information

Congratulations on choosing this Nice product. Please read this handbook carefully.

To make these instructions easier to follow, we have, wherever possible, put them in the order in which they will be carried out during the various system installation phases.

Please read these instructions and the attached "Warnings for fitters" file carefully before installing the product as they contain important information concerning safety, installation, use and maintenance

Anything not expressly specified in these instructions is forbidden. Operations not indicated in these instructions may cause damage to the product, people and property.

Nice declines all liability for badly built gates or any deformations that may occur during use.

Do not install the product in explosive atmospheres.

## 1) Product description

MOBY is an electromechanical gear motor for automating the movement of single or double leaf residential gates.

A NICE control unit should be used to ensure the gear motor works correctly.

The release device allows the gate to be opened manually.

## 2) Installation

### 2.1) Preliminary checks

Before proceeding with installation, check that the structure is suitable, that is, make sure it complies with current standards; make especially sure that:

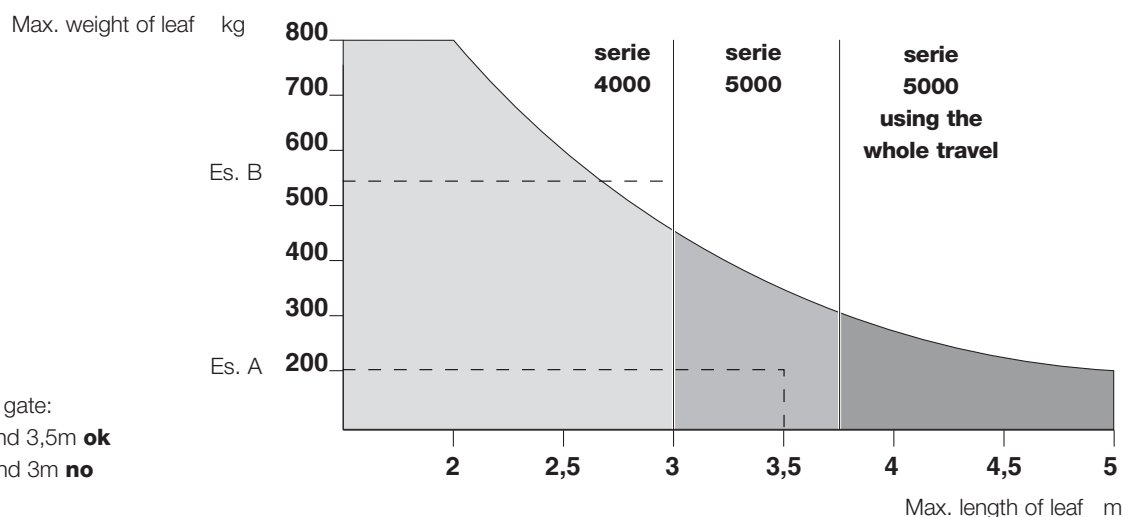
- the gate does not stick when opening or closing;
- the gate is well balanced, that is, if it stops in any position it remains motionless;
- the gate moves silently and smoothly;
- the area identified for fitting the gear motor ensures the gate can be moved easily and safely;
- the packaging is undamaged, please see **fig.1**;
- the assembly area is compatible with the size of the gear motor (**fig.2**), bearing in mind that the opening of the gate and the motor thrust applied depend on where the rear bracket is fixed. Before proceeding with installation, therefore, please read paragraph 2.3 "Assembly", to make sure the gate has a sufficient opening angle and thrust to satisfy customer requirements.

**⚠ Please remember that MOBY powers a gate (with one or two leafs) which must be in good condition and safe; it cannot make up for defects caused by incorrect installation or bad maintenance.**

### 2.2) Limits of use



The shape, the height of the gate (e.g.: blind) and the weather conditions (e.g.: strong winds) can considerably reduce the values shown in the graph to the side.

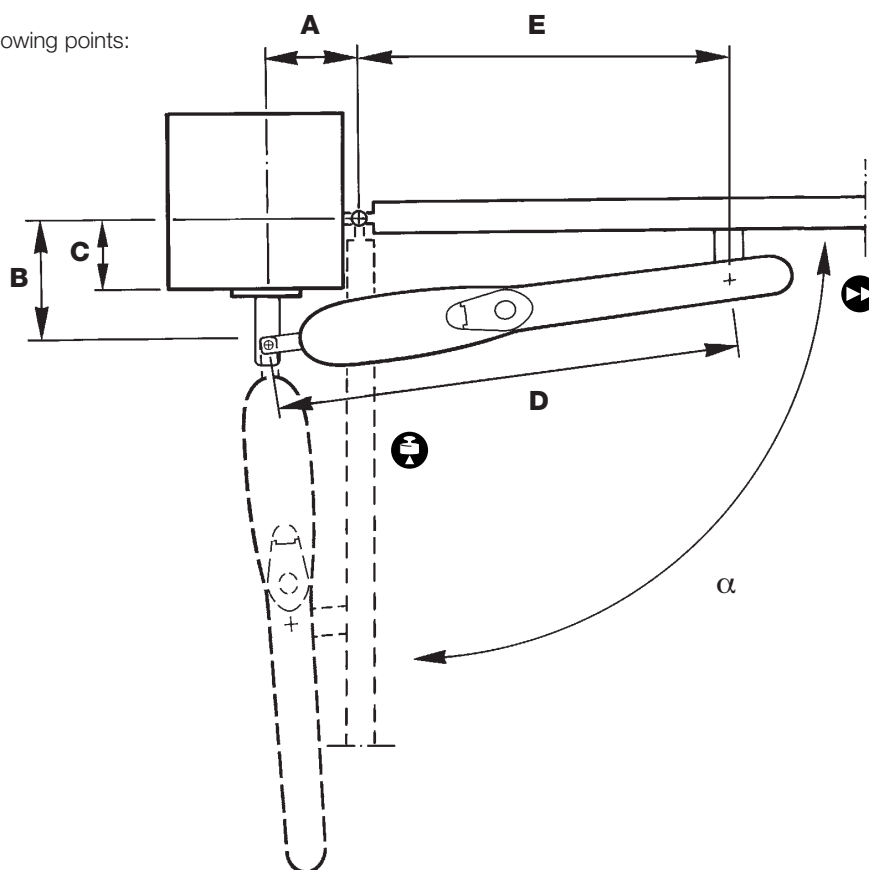
The 24Vdc models are not suitable for use in windy areas



## 2.3) Assembly

To assemble the system correctly, check the following points:

- 1) Projection of column **C**
- 2) Opening angle  $\alpha$
- 3) Speed 
- 4) Thrust 



### 2.3.1) Fixing the rear bracket:

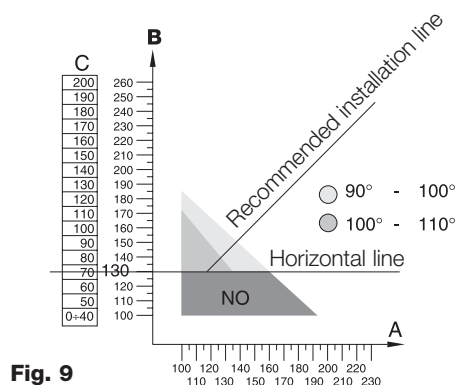
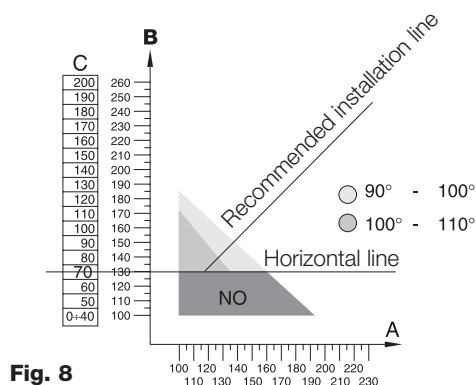
Carry out the following operations:

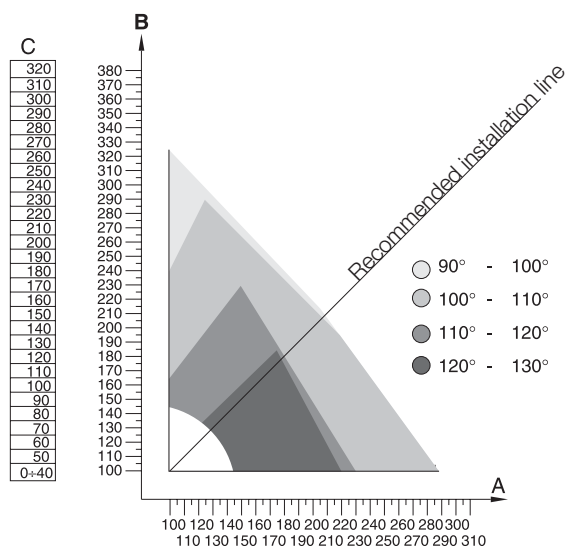
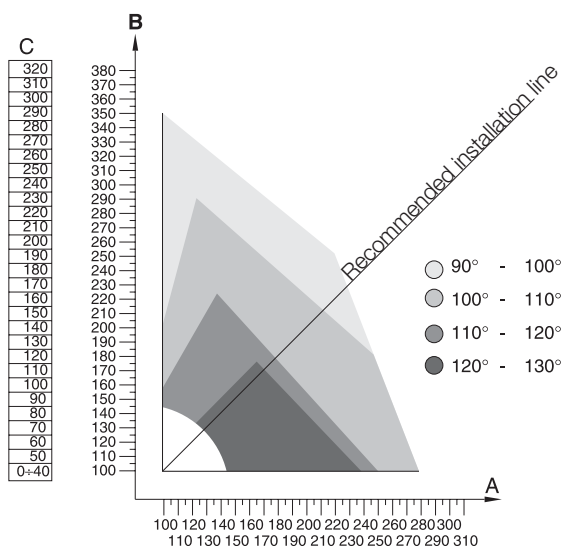
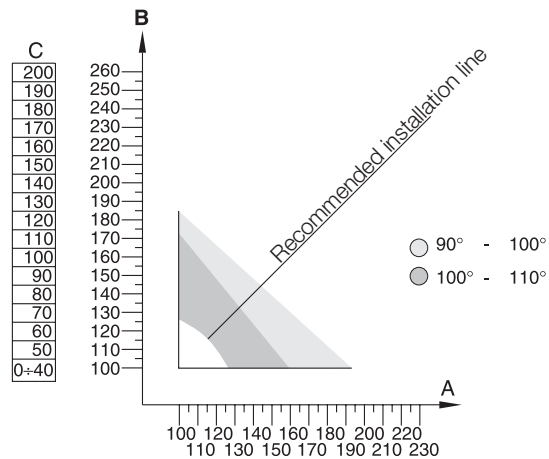
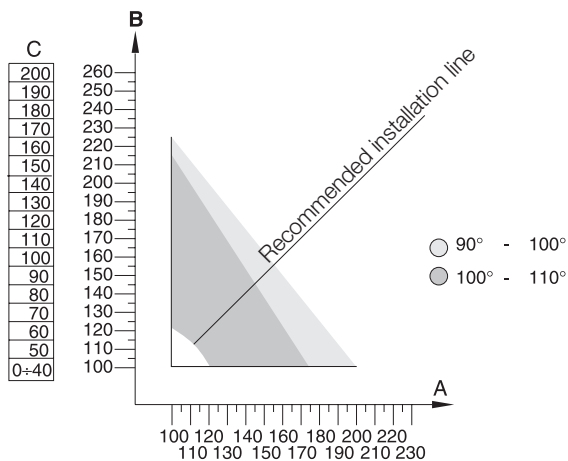
- 1.1** Measure the value of C (the example shows 70mm).
- 1.2** Find the value of C in the graph of the relative MOBY model and draw a horizontal line (**fig.8**).
- 1.3** Find the minimum value of "B" on the graph using the straight line you have just drawn (the example shows 130 mm **fig.9**), the area above the line contains the points where the bracket can be fixed.
- 2** There is a relationship between the opening angle of the gate and the positions of the bracket (A and B) as can be seen in the graphs relative to each product where the different coloured areas represent the maximum permitted angles.

If, for example (**fig.9**), the gate must be opened by  $100^\circ \pm 110^\circ$ , A and B must identify a point on the graph belonging to the corresponding colour area.

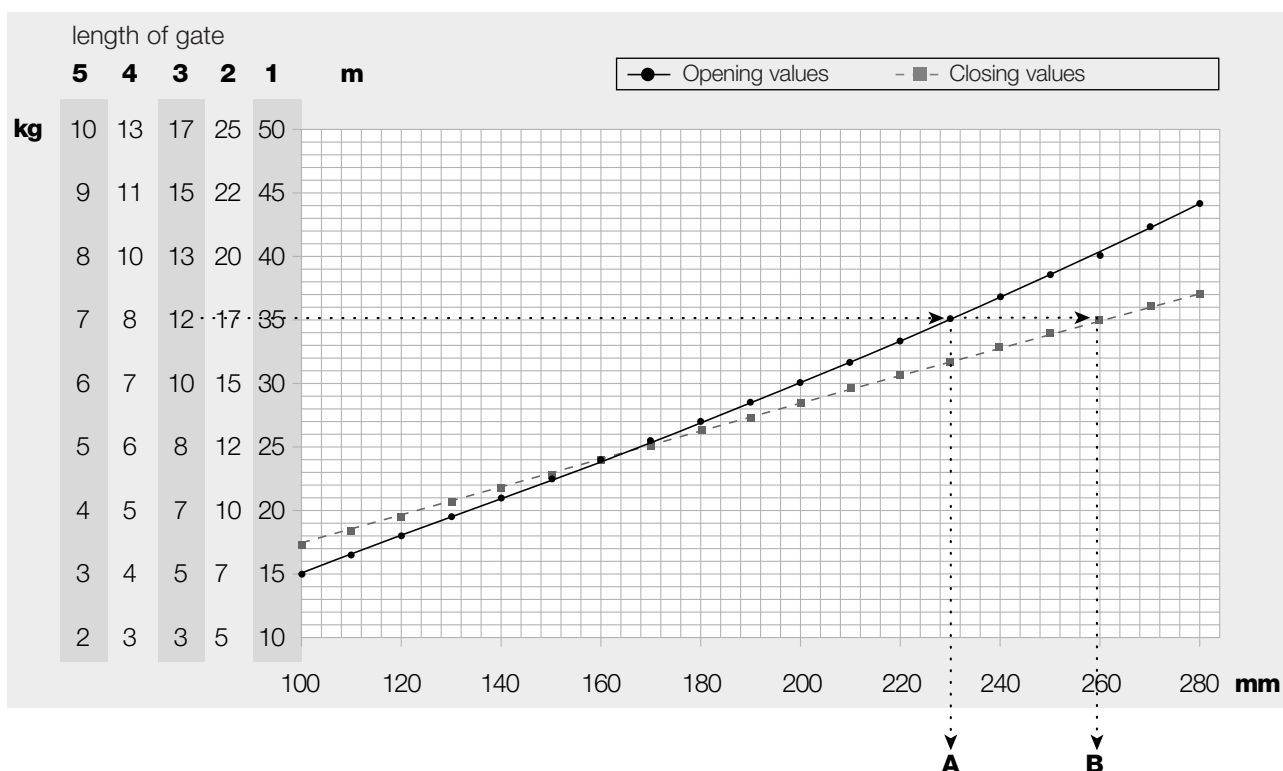
- 3** Inside this area, remember that the thrust applied to the gate and the opening and closing time are directly proportional to the values of A and B and that these values must be similar for linear operation; the recommended installation line should therefore be respected.

### Example





- 4 The following graph is useful for establishing maximum thrust at the end of the gate according to the values of A and B



### 2.3.2) Fixing the front bracket

The front bracket (47) is fitted with its clamp to the gate according to the distances **D** and **E** (see tables); before fixing permanently:

1. Check that the closing line of the gear motor is perfectly horizontal (**fig.4**)
2. Open and close the gate by hand to check it moves smoothly.
3. Remove the gear motor and weld the front bracket (47)

### Fixing the rear of the gear motor (fig.5)

Fix MOBY to the bracket (45) using the fork (46), screw (55), washer (59) and nut (61); completely tighten the latter and then unscrew it by about 1/10 of a turn to give a little play.

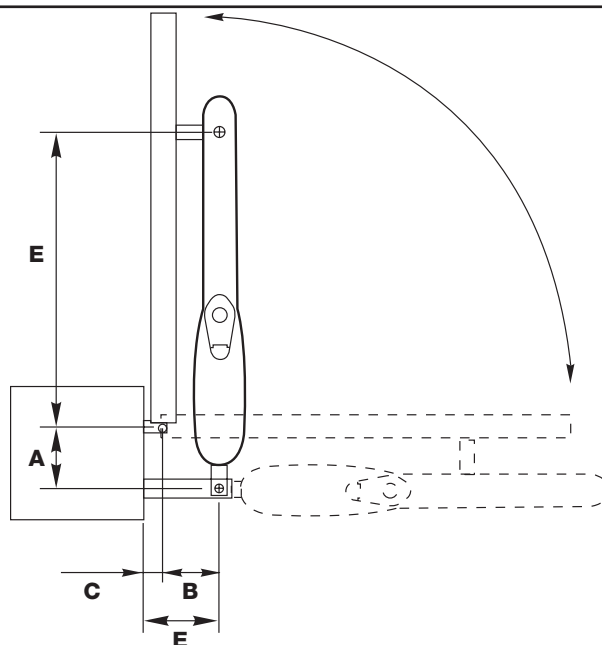
### Fixing the front of the gear motor (fig.6)

Fit the front fork of MOBY (34) into the front bracket (47) and clamp with the screw (56) and washer (60).

MB4005	MB4015	MB4024	MB4605	MB4615	MB4006	MB5015	MB5024	MB5615	MB5016	
D= 750mm					D= 700mm	D= 900mm			D= 850mm	
A	MB4005	MB4015	MB4024	MB4605	MB4615	MB4006	MB5015	MB5024	MB5615	MB5016
100mm			E= 625mm			E= 595mm		E= 775mm		E= 745mm
110mm			E= 615mm			E= 585mm		E= 765mm		E= 735mm
120mm			E= 605mm			E= 575mm		E= 755mm		E= 725mm
130mm			E= 600mm			E= 570mm		E= 750mm		E= 720mm
140mm			E= 590mm			E= 560mm		E= 740mm		E= 710mm
150mm			E= 580mm			E= 550mm		E= 730mm		E= 700mm
160mm			E= 570mm			E= 540mm		E= 720mm		E= 690mm
170mm			E= 560mm			E= 530mm		E= 710mm		E= 680mm
180mm			E= 550mm			E= 520mm		E= 700mm		E= 670mm
190mm			E= 540mm			E= 510mm		E= 690mm		E= 660mm
200mm			E= 530mm			E= 500mm		E= 680mm		E= 650mm

### 2.3.3) Opening the gate outwards

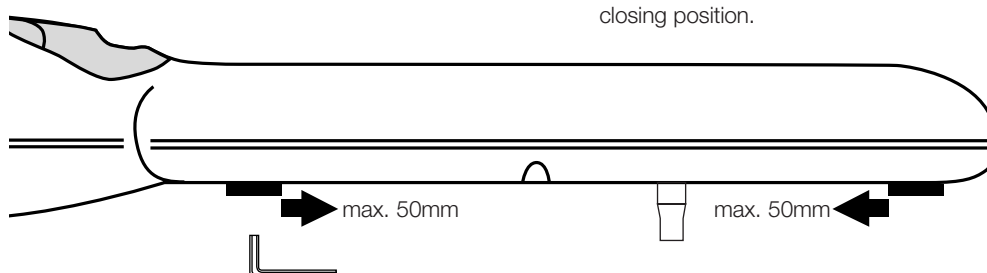
To ensure the gate moves correctly, it may sometimes be necessary to use a longer bracket (PLA6, optional) as shown in the figure.



### 2.4) Adjusting the limit switch

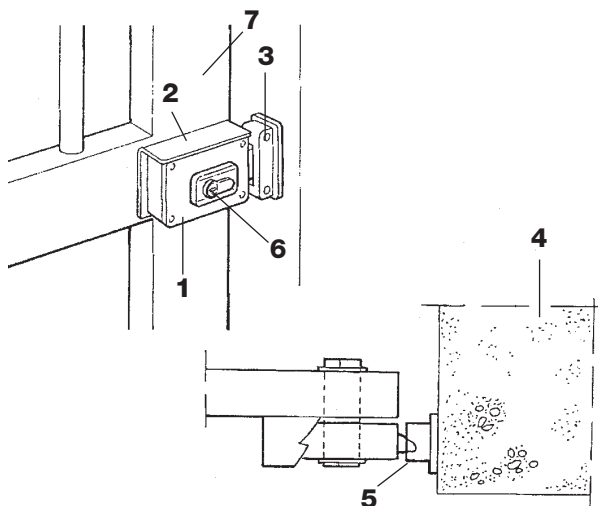
The limit switch allows the stop position of the gate to be adjusted, thereby eliminating the need for travel stops and preventing the gate from hitting them. Simultaneously, a microswitch disconnects power from the motor.

- A) Release the gear motor (see chapter 5)
- B) Loosen the screw (54)
- C) Open the gate to the required position
- D) Move the limit switch to the required position by turning the screw
- E) Tighten the screw (54)
- F) Models **MB4006** and **MB5016** also have a limit switch for the closing position.

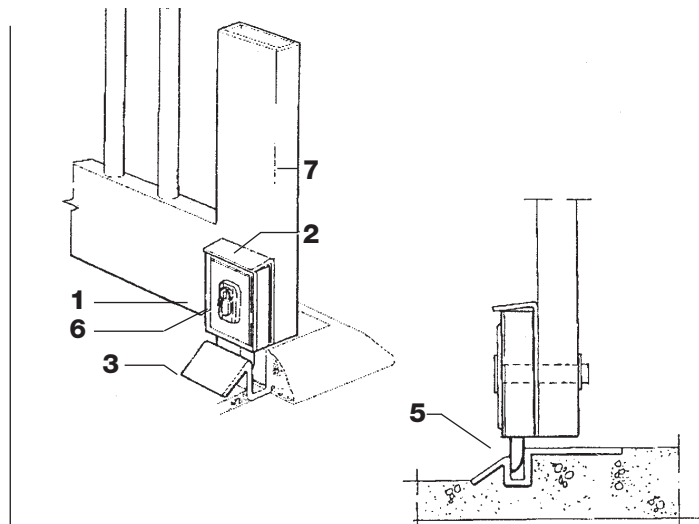


## 2.5) Mounting the electric lock (optional accessory)

- 1 Electric lock
- 2 Fixing plate for electric lock (specify if horizontal or vertical)
- 3 Lock bolt strike plate\*
- 4 Strike plate stop
- 5 Lock bolt
- 6 Lock
- 7 Gate

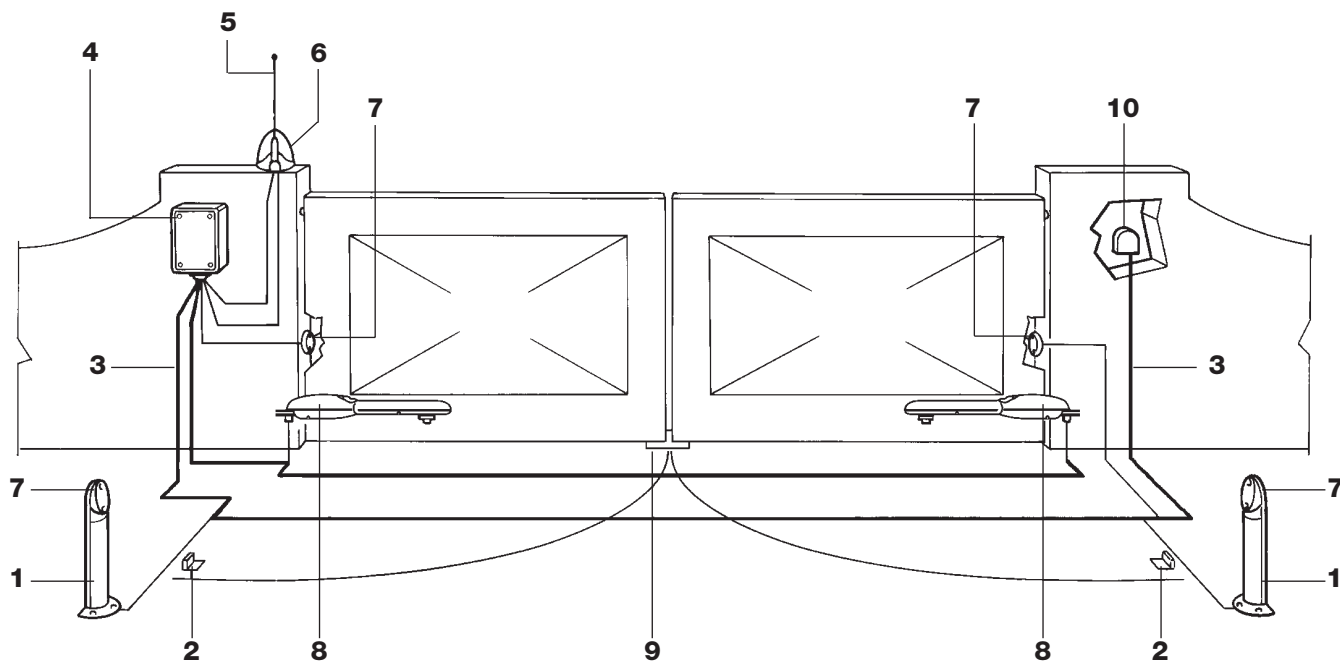


Horizontal assembly (for one leaf)



Vertical assembly (for two leaves)

## 2.6) Typical system layout



- 1 Column for photocells
- 2 Pair of opening travel stops
- 3 Mains power line
- 4 Control unit
- 5 Aerial
- 6 Flashing lamp
- 7 Photocell
- 8 Moby actuator
- 9 Vertical electric lock\*
- 10 Key switch or digital keypad

\*to install if the reversible models MB4605 and MB4615 are used or if the gate exceeds a length of 3 m for each leaf.



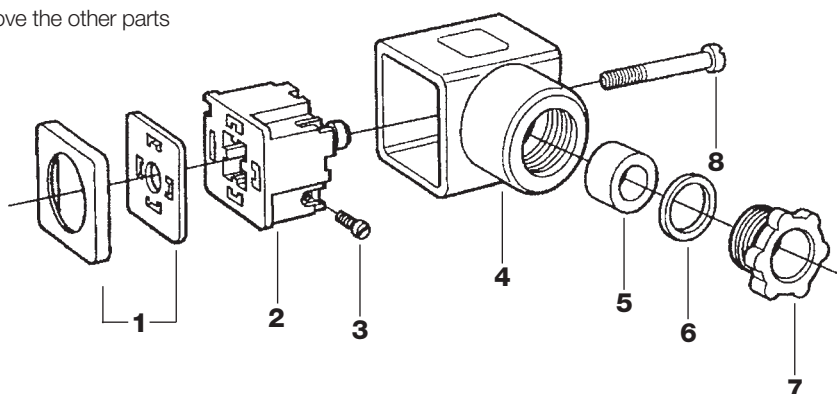
## 2.7) Electrical connections:

### Connecting the connector

The connector is supplied assembled and is located in the lower part of the gear motor (see item 48 of the spare parts list inside the cover). This is used to connect the electrical control unit.

Remove the screw (8) and use a screwdriver to remove the other parts (as shown in the figure), including the screws (3).

- 1 Seals
- 2 Contact carriers
- 3 Clamping screw
- 4 Protection
- 5 Cable holder
- 6 Washer
- 7 Cable clamp
- 8 Fixing screw



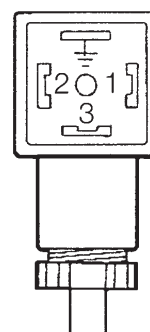
N.B.: the connector protects to IP65 DIN 40050 only if it is correctly mounted as shown in the figure.

### Motor connections for models:

**MB4005 - MB4006 - MB4015 - MB4605**  
**MB4615 - MB5015 - MB5016 - MB5615**

Connect the cable wires to the "contact carriers 2" following the indications shown in the figure..

- 1 = open
- 2 = close
- 3 = Common
- ⊥ = Earth

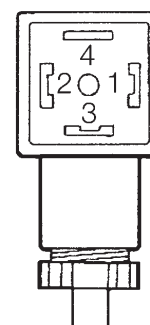


### Motor connections for models:

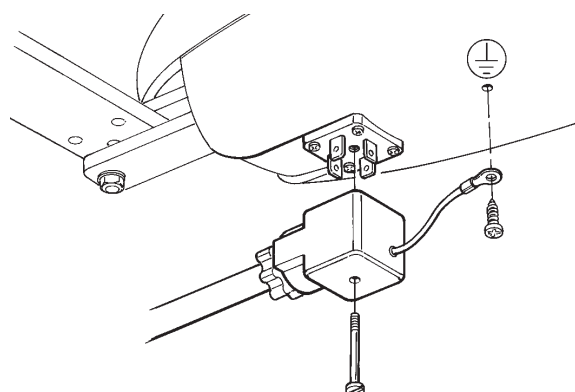
**MB4024 - MB5024**

Connect the cable wires to the "contact carriers 2" following the indications shown in the figure.

- 1 = Motor +
- 2 = Motor -
- 3 = Encoder +
- 4 = Encoder -



**⚠ Always remember to connect the earth cable according to current standards (EN 60204 - IEC 64-1 - EN 60335) as shown in the figure.**



### 3) Manual manoeuvre or release

#### Manual manoeuvre for models:

**MB4005 - MB4006 - MB4015 - MB4024 - MB5015  
MB5016 - MB5024**

The gate must be moved manually (**fig. 3**) in case of a power failure or a system fault.

Manual movement allows the gear motor to move freely only if this is correctly mounted and original accessories have been used.

#### Manual manoeuvre for reversible models:

**MB4605 - MB4615 - MB5615**

In these models it is unnecessary to release the gear motor to open the gate manually (make sure the electric lock is released): just push hard on the end of the gate.

### 4) Testing

The whole system must be tested by qualified and expert staff who must perform the tests required, according to the relative risk.

To test MOBY, proceed as follows:

- close the gate;
- disconnect the power supply from the control unit;
- release the gear motor;
- completely open the gate by hand;
- check that the gate does not stick when moving;
- check that when the gate is stopped at any point it remains motionless;
- check that the safety system and mechanical stops are in good condition;
- check that the screw connections are perfectly tight;
- check that the lead nut and internally threaded screw are well greased;
- check that the photocells are clean;
- after the above checks, block the gear motor and power the control unit.
- MOBY does not have any torque adjustment devices; this kind of adjustment is therefore made by the control unit.
- measure the force of impact as required by EN12453 and EN12445 standards

### 5) Maintenance

MOBY does not require any special maintenance, but a scheduled control at least every six months will ensure the gear motor lasts longer and that the system works correctly and safely.

**Maintenance simply involves repeating the test procedure.**

#### 5.1) Disposal

MOBY comprises various types of materials which must be disposed of in compliance with the laws of the country of installation. There are no particular dangers or risks deriving from demolition of the system.

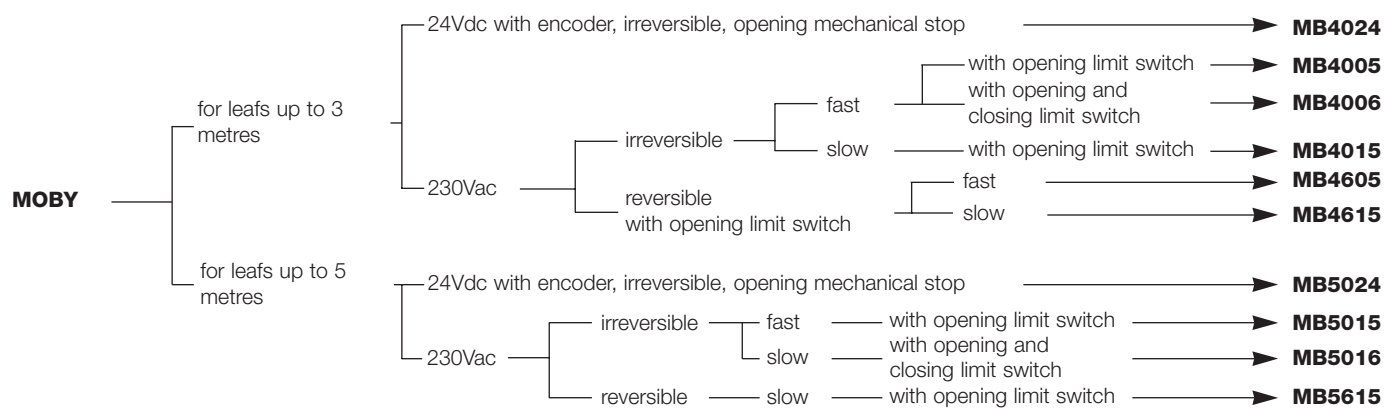
If waste sorting is required, the components should be grouped by type of material (electrical, aluminium, plastic, etc.).

## 6) Technical specifications

GB

	MB4005	MB4015	MB4605	MB4615	MB4006	MB5015	MB5016	MB5615	MB4024	MB5024
Power input (Vac 50Hz)	230									
(Vdc)									24	
Current (A)	1,1								5	
Absorbed power (W)	230								120	
Condenser incorp. (uF)	7									
Protection level (IP)	43									
Speed (m/s)	0,016	0,013	0,016	0,013	0,016	0,013			0,016	
Travel (Y) (mm)	310				270	470	430	470	310	470
Max. thrust (N)	2000									
Operating temp. (°C Min/Max)	-20 ÷ +70									
Thermal protection (°C)	140									
Work cycles (%)	30								80	
Weight (kg)	6				7				6	7

### 6.1) Models and characteristics



gear motor  
for swing gates



GB



# moby

## Instructions and warnings for users of the MOBY gear motor

**Congratulations** on choosing a Nice product for your automation system!

Nice S.p.A. produces components for automating gates, doors, shutters and awnings: gear motors, control units, radio control units, flashing lights, photocells and accessories.

Nice only uses first rate materials and production processes and constantly develops innovative technical, aesthetic and ergonomic solutions in order to make its products as simple to use as possible: your fitter will certainly have chosen the most suitable article for your requirements from the large range of Nice products.

Nice however, is not the producer of your automated system as this is the result of a process of analysis, evaluation, choice of materials and installation performed by your fitter.

Each automated system is unique and only your fitter has the experience and professionalism required to create a system that is tailor-made to your requirements, featuring long-term safety and reliability, and, above all, professionally installed and compliant with current regulations.

An automated system is handy to have as well as being a valid security system. Just a few, simple operations are required to ensure it lasts for years.

Even if your automated system satisfies regulatory safety levels, this does not eliminate "residue risks", that is, the possibility of dangerous situations being generated, usually due to irresponsible or incorrect use. For this reason we would like to give you some suggestions on how to avoid these risks:

- **Before using your automated system for the first time**, ask your fitter to explain how residue risks can arise and spend a few minutes reading the **instructions and warnings for the user** handbook that the fitter will have given you. Keep this manual for future use and, if you should ever sell your automated system, hand it over to the new owner.
- **Your automated system is a machine which carries out your commands to the letter**; irresponsible or incorrect use may cause it to become dangerous: do not move the automated system if animals or objects are in its working radius.

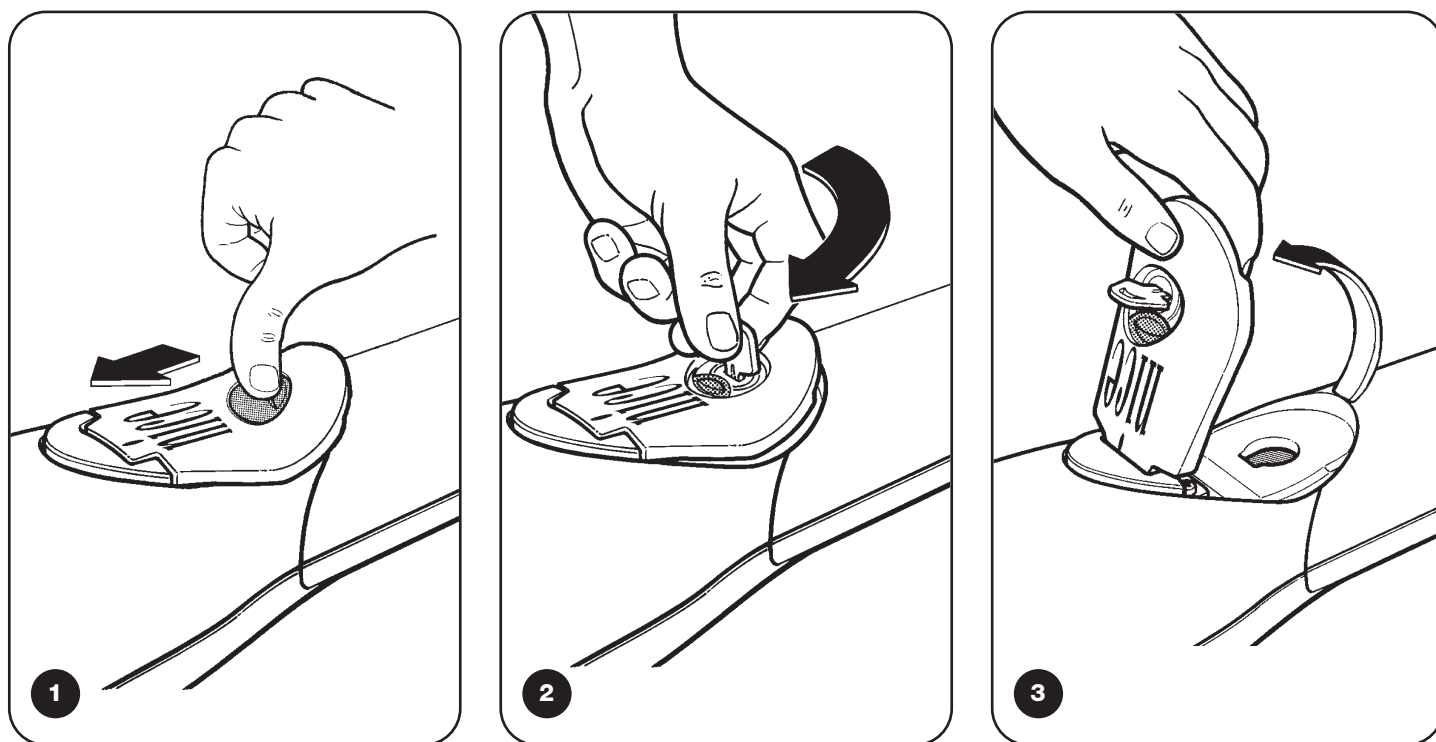
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— ISO 9001 —



- **Children:** an automated system ensures a high level of safety as it always offers reliable and safe operation and its detection systems stop it from moving in the presence of people or objects. However, children should not be allowed to play near it. Do not let them accidentally use the system by leaving the remote control unit within their reach: **it is not a toy!**
- **Faults.** If you notice any abnormal behaviour, disconnect the system from the electricity supply immediately and perform the manual release operation. Do not attempt to make repairs yourself but call in your fitter: in the meantime the system can work as a non-automated gate once the gear motor has been released as described further on.
- **Maintenance.** Just like all machines, your automated system requires periodic maintenance to ensure it works as long as possible and in total safety. Agree on a routine maintenance plan with your fitter; Nice recommends a visit once every six months for normal residential use but this period can vary depending on how often the system is used.  
All controls, maintenance work or repairs may only be carried out by qualified personnel.
- Do not modify the system or its programming and adjustment parameters even if you think you can do it: your fitter is responsible for this.
- Final testing, routine maintenance and any repairs must be

documented by the fitter and such documents kept by the owner of the system.

- **Disposal.** At the end of the life of the automatic system, make sure that it is demolished by qualified personnel and that the materials are recycled or disposed of according to local regulations.
- **In case of breakage** or during a power failure. While waiting for your fitter to call (or power to come on again if the system does not have buffer batteries), the system can be used just like any other manual opening system. To do this, perform the manual release operation: this can be done by the user and Nice has made it as easy as possible, without the need for tools or physical effort.

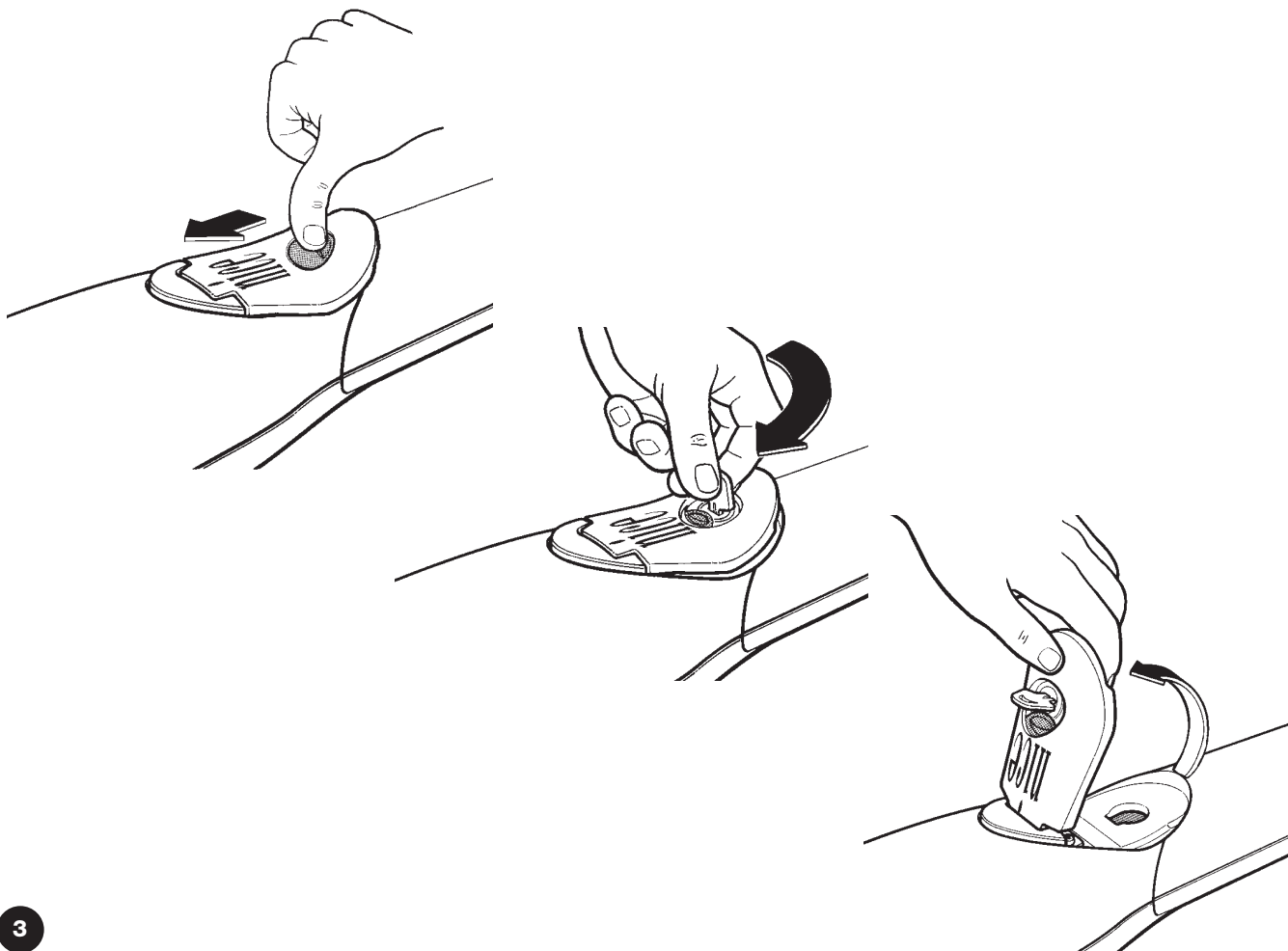


1. Push back the protective membrane as shown in **fig. 1**
2. insert the key and turn it anti-clockwise as shown in **fig. 2**
3. Pull up the handle in the direction of the arrow until it reaches the point shown in **fig. 3**
4. Move the leaf to its maximum opening or closing point
5. Carry out the above operations backwards when locking the system

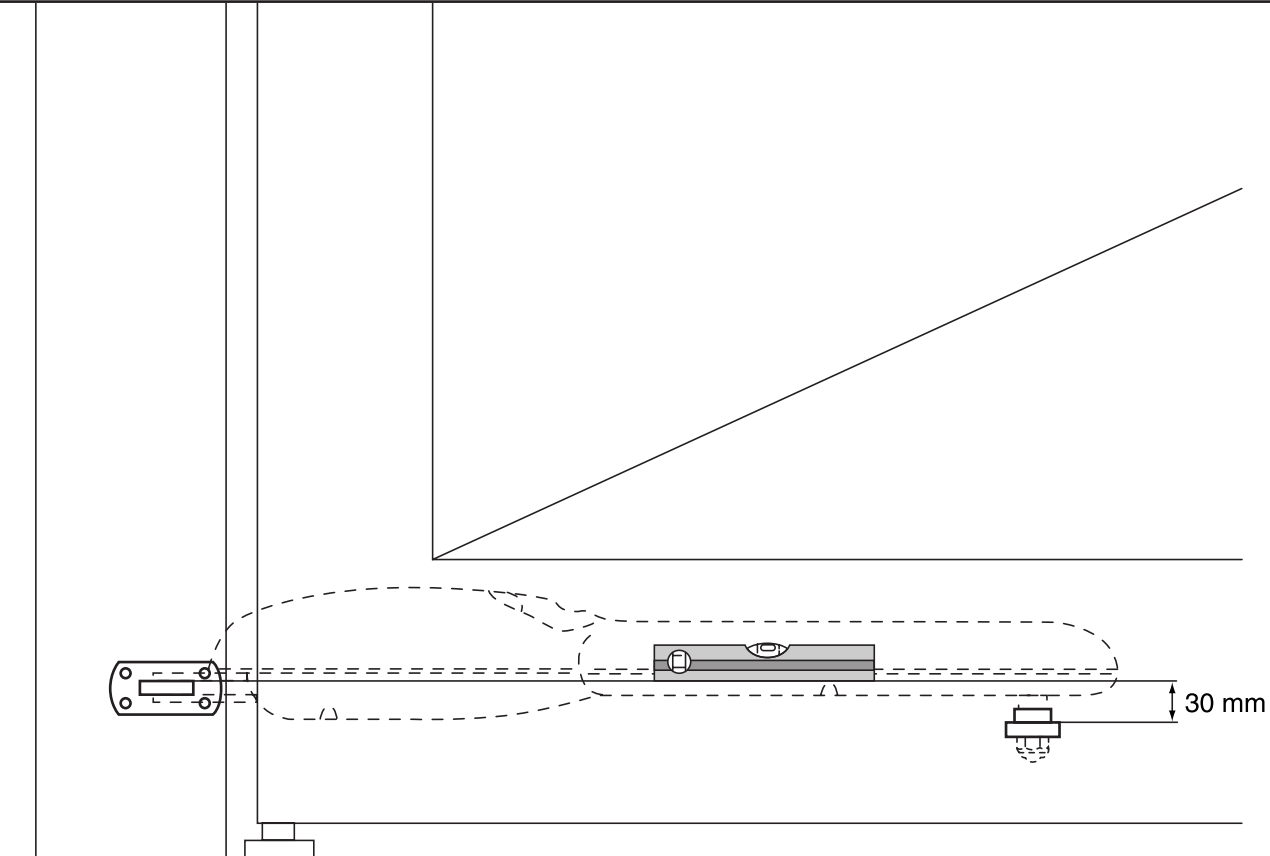
**Important:** if the radio control unit (if supplied) starts working badly after a time, or does not work at all, the batteries may be flat (They can last from several months to two/three years depending on the type). You can notice this from the fact that the transmission OK LED is faint, doesn't light up at all, or lights up for just a moment. Before contacting your fitter, try exchanging the battery with that of another transmitter you know that works: if this is the reason for the fault, just replace the battery with another one of the same kind.

**Are you satisfied?** If you wish to add a new automated system to your house, contact your fitter and we at Nice will provide the advice of a specialist, the most developed products on the market, leading-edge operativeness and maximum compatibility.

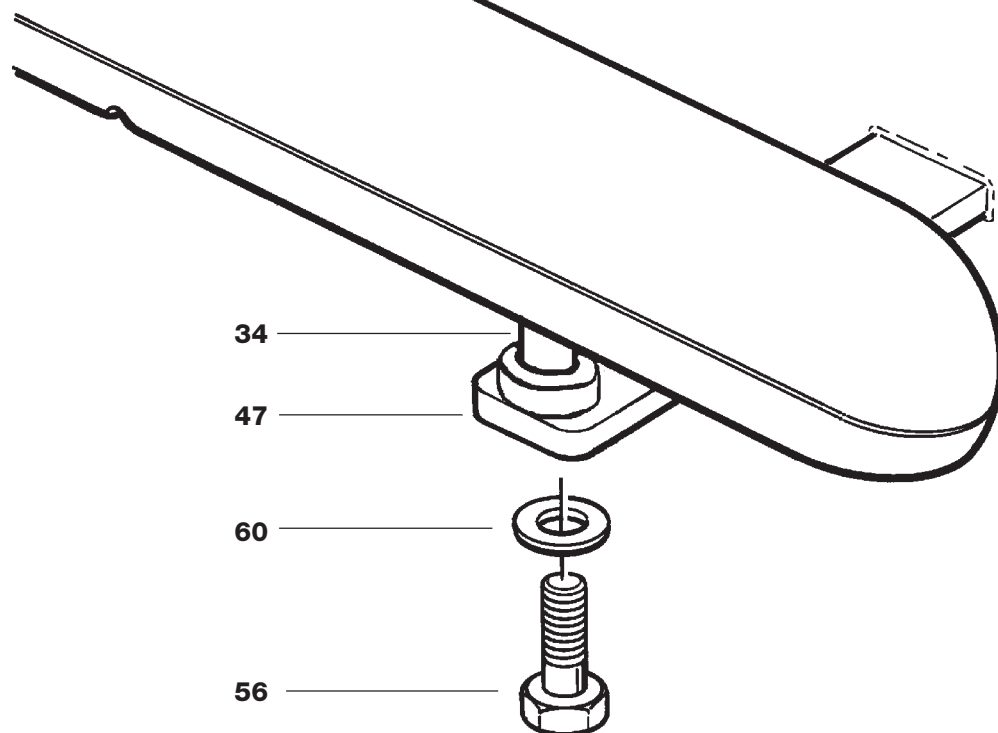
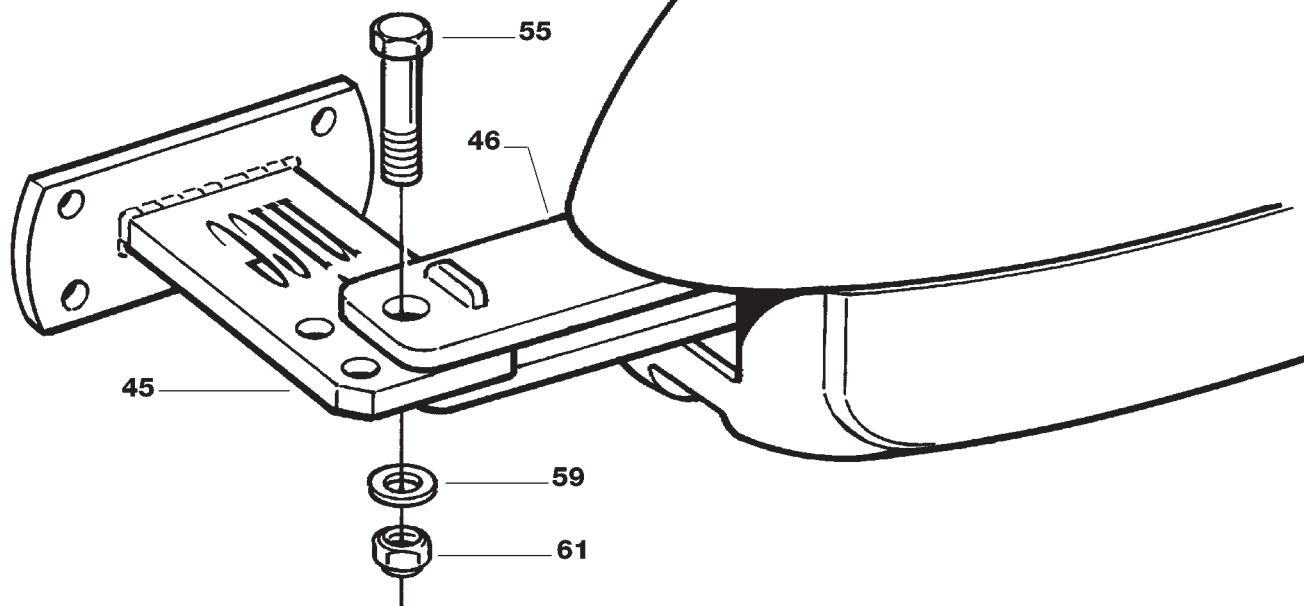
Thank you for reading these suggestions and we trust you are fully satisfied with your new system: please contact your fitter for all your current or future requirements.

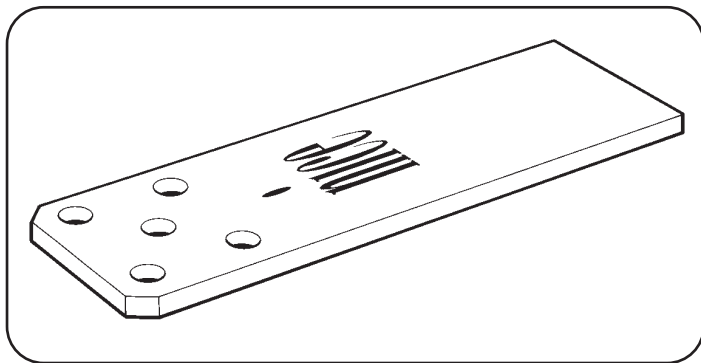


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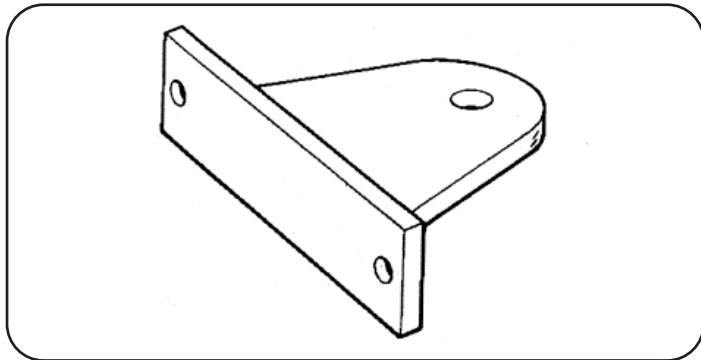


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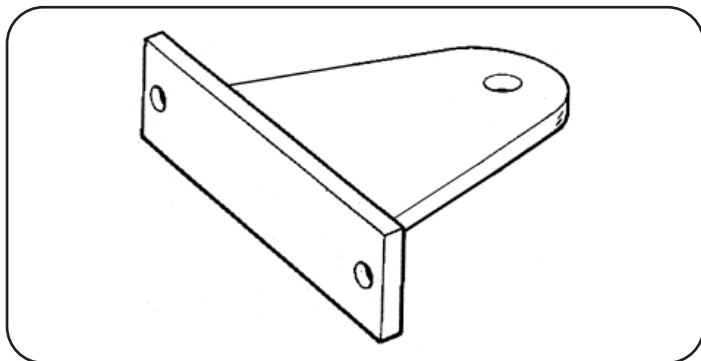




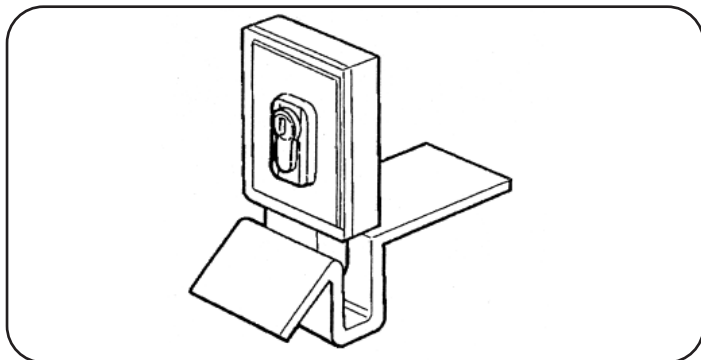
**PLA 6**



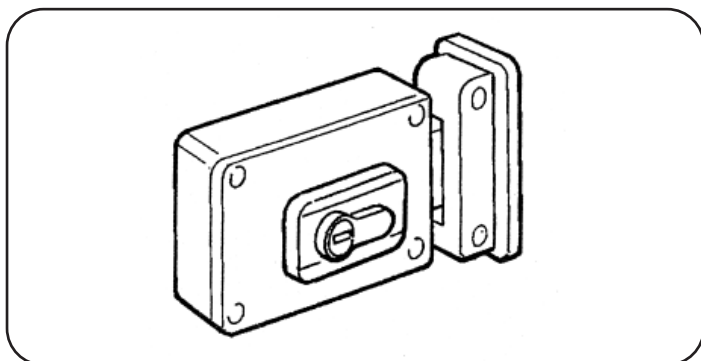
**PLA 7 series 4000**



**PLA 8 series 5000**



**PLA 10**



**PLA 11**

#### MB4005

rif.	mod.	art.
1	BMGMOPA	34567
2	BMGMOPB	34567
3	BMGWAA	34567
4	BMGWAB	34567
5	PEDS501A	4650
6	PECR50C	4670
7	PMCU1	4630
8	PMCU12	4630
9	PMCAC11A	4630
10	BMGW3	4567
11	BMGW4	4567
12	V4x65	5102
13	D4-D	5110
14	V4.8x13	5101
15	PMDIC	4610
16	PMCBR	4630
17	PMC55	4630
18	PMDAP4	4610
19	PMC55C	4630
20	PPD0452	4540
21	MO-B	2640
22	PMDC05	4610
23	PMCSE18	4630
24	PMP55	4610
25	R08C	5120
26	GOR-E1	5501
27	PMDIC	24610
28	PMDAP3	4610
29	PMCU3	4610
30	PMCSE25	4630
31	PMCS51	4630
32	PMDVR5	4610
33	PPD0316	4540
34	PMPU1	4610
35	CM-B	1630
36	BPMMO	4540
37	V4x5	5102
38	BMGMOS	4567
39	MO-S	2640
40	PMCS42	4630
41	V4.2x9	5101
42	BPMW2	4540
43	07U450	0727
44	PMDPA	4610
45	PMDSMP	4610
46	BMFOR	4567
47	PMDSMA	4610
48	C4VFMPM	2065
49	C4VMPM	8003
50	ETICHETTA	
51	BPMMO1	4540
52	CMMO	8003
53	D6	5102
54	V6x14	5102
55	V10x40	5101
56	V8x10	5102
57	V6.3x19	5101
58	V2.9x9.5-A	5101
59	R10	5120
60	R8	5120
61	D10	5110
62	V4x8	5105
63	R04E	5120
66	PPD0572	4540
67	BPMMO2	4540

#### MB4006

rif.	mod.	art.
65	CMMO1	8003

#### MB4015

rif.	mod.	art.
32	PMDVR6	4610
33	PPD0316A	4540

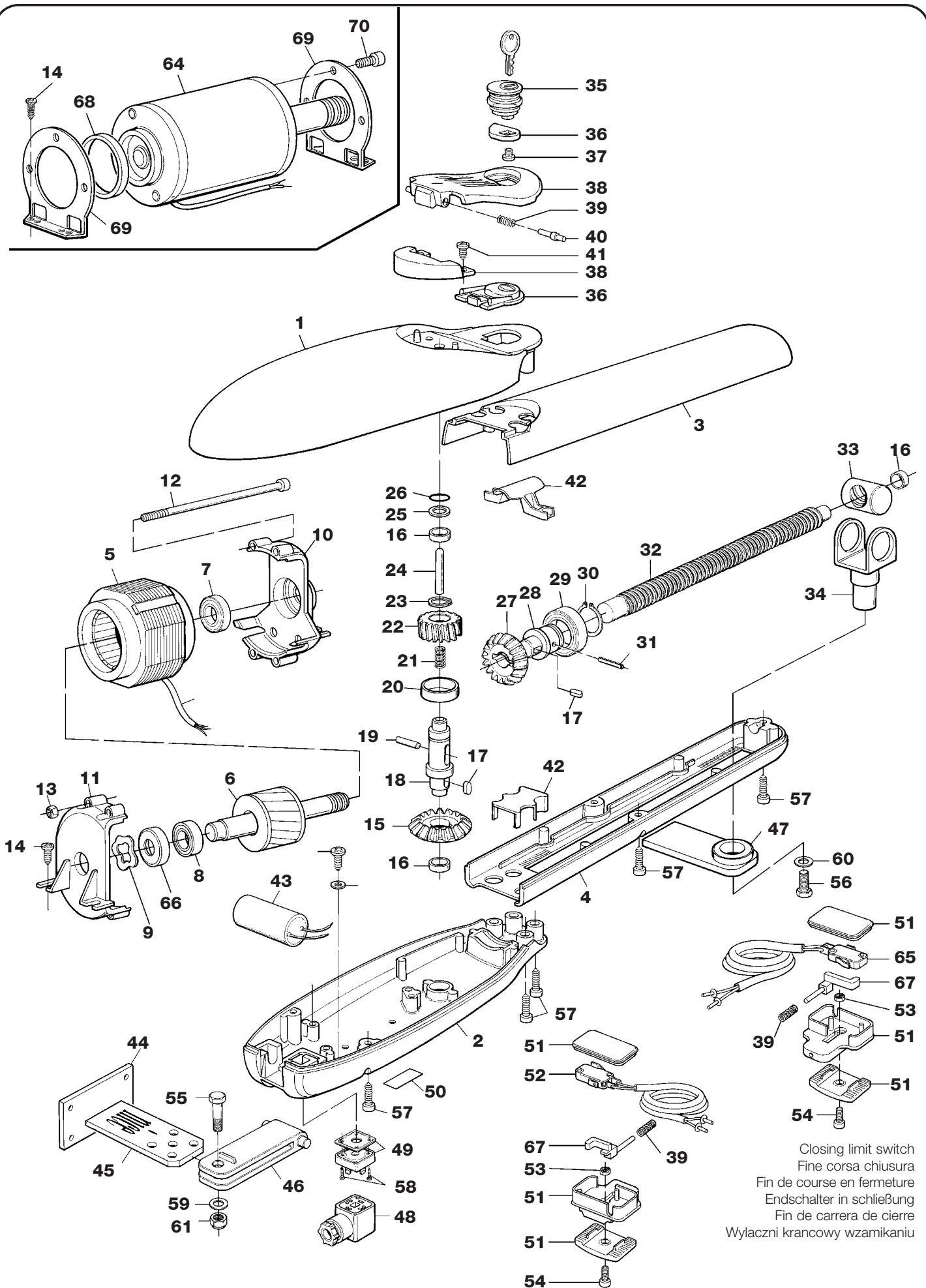
#### MB5015

rif.	mod.	art.
3	BMGWALA	34567
4	BMGWALB	34567
32	PMDVR7	4610
33	PPD0316A	4540
47	PMD0101	4610

#### MB5016

rif.	mod.	art.
3	BMGWALA	34567
4	BMGWALB	34567
32	PMDVR7	4610
33	PPD0316A	4540
47	PMD0101	4610
65	CMMO2	8003





# Dichiarazione CE di conformità / EC declaration of conformity

(secondo Direttiva 98/37/CE, Allegato II, parte B) (according to 98/37/EC Directive, Enclosure II, part B)

Numero / Number: 142/MB

Data / Date: 01/2001

Revisione / Revision: 0

**Il sottoscritto Lauro Buoro, Amministratore Delegato, dichiara che il prodotto**

The undersigned Lauro Buoro, General Manager of the following producer, declares that the product

**Nome produttore** / Producer name: NICE S.p.A.

**Indirizzo** / Address: Via Pezza Alta 13, 31046 Z.I. Rustignè - ODERZO - ITALY

**Tipo** / Type: Attuatore elettromeccanico "MOBY" per cancelli a battenti / Electromechanical gearmotor for swing gates

**Modello** / Model: MB4005, MB4006, MB4015, MB4024, MB4605, MB4615, MB5015, MB5016, MB5024, MB5615

**Accessori** / Accessories: Nessun accessorio / No accessory

**Risulta conforme a quanto previsto dalle seguenti direttive comunitarie** / Appears to be in conformity with the following community (EEC) regulations

Riferimento n°	Titolo
Reference n°	Title
73/23/CEE, 93/68/CEE	DIRETTIVA BASSA TENSIONE e successiva modifica / Low Voltage Directive
89/336/CEE	DIRETTIVA COMPATIBILITA' Elettromagnetica (EMC) / EMC Electromagnetic Compatibility Directive
98/37/CE (EX 89/392/CEE)	DIRETTIVA MACCHINE / Machinery Directive

**Risulta conforme a quanto previsto dalle seguenti Norme armonizzate** / Appears to be in conformity with the following harmonized standards regulations

Riferimento n°	Edizione	Titolo	Livello di valutazione	Classe
Reference n°	Issue	Title	Estimate level	Class
EN60335-1	04/1998	Sicurezza degli apparecchi elettrici d'uso domestico e similare. Norme generali Safety of household and electrical appliances. General requirements		
EN60204-1	09/1993	Sicurezza del macchinario - Equipagg. elettrico delle macchine Parte 1: Reg. generali / Safety of machinery - Electrical equipment of machines Part 1: General requirements		
EN55022	09/1998	Apparecchi per la tecnologia dell'informazione Caratteristiche di radiodisturbo. Limiti e metodi di misura Information technology equipment - Radio disturbance characteristics. Limits and methods of measurement		B

**Risulta conforme a quanto previsto dalle altre norme e/o specifiche tecniche di prodotto** / Appears to be in conformity with the other standards and/or product technical

Riferimento n°	Edizione	Titolo	Livello di valutazione	Classe
Reference n°	Issue	Title	Estimate level	Class
EN 12445	11/2000	Industrial, commercial and garage doors and gates Safety in use of power operated doors - Test methods		
EN 12453	11/2000	Industrial, commercial and garage doors and gates Safety in use of power operated doors - Requirements		

**Inoltre dichiara che non è consentita la messa in servizio del prodotto suindicato finché la macchina, in cui il prodotto stesso è incorporato, non sia identificata e dichiarata conforme alla direttiva 98/37/CE** / He declares, moreover, that it is not allowed to use the above mentioned product until the machine, in which this product is incorporated, has been identified and declared in conformity with the regulation 98/37/CE.

**P.S.: Il prodotto suindicato si intende parte integrante di una delle configurazioni di installazione tipiche, come riportato nei nostri cataloghi generali** / The above mentioned product is meant integral part of one of the installation configuration as shown on our general catalogues

Oderzo, 20 Dicembre 2000

Amministratore delegato  
(General Manager)  
Lauro Buoro

COMPANY  
WITH QUALITY SYSTEM  
CERTIFIED BY DNV  
ISO 9001



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