



CE

AUTOMATION  
FOR SWING GATES

ATI SERIES



INSTALLATION MANUAL

**A3024N**

**A5024N**



English

EN



# **WARNING!**

**Important instructions for the safety of people:**

## **READ CAREFULLY!**



### **Foreword**

• Use of the products must be restricted to its intended use (i.e. that for which it was expressly built for). Any other use is to be considered dangerous. Came Cancelli Automatici S.p.A. is not liable for any damage resulting from improper, wrongful or unreasonable use • Keep these warnings with the installation and use manuals issued with the automated system.

### **Before installing**

*(preliminary check: in case of a negative outcome, do not proceed before having complied with the safety obligations)*

• Make sure that the parts you intend to automate are in good working order, and that they are properly balanced and aligned. Also, make sure that proper mechanical stops are already in place • If the operator will be installed at a height of less than 2.5 m from the ground or other access level, check whether you will need any protections and/or warnings • Any gate leaves, fitted with pedestrian entrances, onto which you will install an operator, must have a blocking mechanism when the gate is in motion • Make sure that the opening of the automated gate is not an entrapment hazard as regards any surrounding fixed parts • Do not mount the operator upside down or onto any elements that may fold under its weight. If needed, add suitable reinforcements at the points where it is secured • Do not install onto gates on either an upward or downward slope (i.e. that are not on flat, level ground) • Check that any lawn watering devices will not wet the gearmotor from the bottom up.

### **Installation**

• Carefully section off the entire site to prevent unauthorised access, especially by minors and children • Be careful when handling operators that weigh more than 20 Kg (see installation manual). In such cases, employ proper weight handling safety equipment • All opening commands (e.g. buttons, key selectors, magnetic detectors, etc.) must be installed at least 1.85 m from the gate's area of operation perimeter - or where they cannot be reached from the outside of the gate. Also, the direct commands (e.g. push button, or proximity devices, etc.) must be installed at a height of at least 1.5 m and must not be accessible to the public • All 'maintained action' commands, must be placed where the moving gate leaves, transit areas and driveways are completely visible • If missing, apply a permanent label that shows the position of the release mechanism • Before delivering to the client, verify that the system is EN 12453 (impact test) standard compliant. Make sure that the operator has been properly adjusted and that the safety and protection devices, as well as the manual release

are working properly • Where necessary and in plain sight, apply the Warning Signs (e.g. gate plate).

### **Special instructions and advice for users**

• Keep the gate's area of operation clean and clear of any obstacles. Trim any vegetation that may interfere with the photocells • Do not allow children to play with the fixed command devices, or in the gate's area of operation. Keep any remote control devices (i.e. transmitters) away from the children as well • Frequently check the system, to see whether any anomalies or signs of wear and tear appear on the moving parts, on the component parts, on the securing points, on the cables and any accessible connections. Keep any joints (i.e. hinges) lubricated and clean, and do the same where friction may occur (i.e. slide rails) • Perform functional tests on photocells and sensitive edges, every six months. Keep glass panels constantly clean (use a slightly water-moistened cloth; do not use solvents or any other chemical products) • If the system requires repairs or modifications, release the operator and do not use it until safety conditions have been restored • Cut off the power supply before releasing the operator for manual openings. See instructions • Users are FORBIDDEN to carry out ANY ACTIONS THAT THEY HAVE NOT BEEN EXPRESSLY ASKED TO DO OR SO INDICATED in the manuals. Any repairs, modifications to the settings and extraordinary maintenance MUST BE DONE BY THE TECHNICAL ASSISTANCE STAFF • On the periodic maintenance log, note down the checks you have done.

### **Special instructions and advice for all**

• Avoid working near the hinges or moving mechanical parts • Stay clear of the gate's area of operation when in motion • Do not resist the direction of movement of the gate; this may present a safety hazard • At all times be extremely careful about dangerous points that must be indicated by proper pictograms and/or black and yellow stripes • When using a selector or command in 'maintained action' mode, keep checking that there are no people in the area of operation of the moving parts. Do this until you release the command • The gate may move at any time without warning • Always cut the power when cleaning performing maintenance.

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**“IMPORTANT INSTALLATION, SAFETY INSTRUCTIONS”**

**“CAUTION: IMPROPER INSTALLATION MAY CAUSE SERIOUS DAMAGE, FOLLOW ALL INSTALLATION INSTRUCTIONS CAREFULLY”**

**“THIS MANUAL IS ONLY FOR PROFESSIONAL OR QUALIFIED INSTALLERS”**



**Legend of symbols**

-  This symbol tells you to read the section with particular care.
-  This symbol tells you that the sections concern safety issues.
-  This symbol tells you what to say to the end-users.

**Intended use and restrictions**

**Intended use**

The ATI 24V N gearmotor is specifically engineered to automate residential and condominium swing gates, even under intensive use.

 Any use, other than that described above or installations performed in ways other than those described herein, are forbidden.

**Restrictions**

Gate leaf width m	Gate leaf weight kg	
	<b>A3024N</b>	<b>A5024N</b>
2.00	800	1000
2.50	600	800
3.00	400	600
4.00	/	500
5.00	/	400

**Reference Standards**

The company: Came Cancelli Automatici is ISO 9001 quality certified; it has also obtained the ISO 14001 environmental safeguarding certification. Came engineers and manufactures all of its products in Italy.

This product complies with the following standards: *see declaration of compliance.*

**Description**

**Gearmotor**

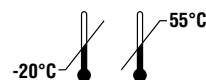
This product is engineered and manufactured by CAME CANCELLI AUTOMATICI S.p.A. and complies with current safety regulations.

The gearmotor is composed of two, cast aluminium half shells inside of which rest the gearmotor and endstops – with electro blocking – and an endless screw, epicycloidal gear reduction system.

**Technical features**

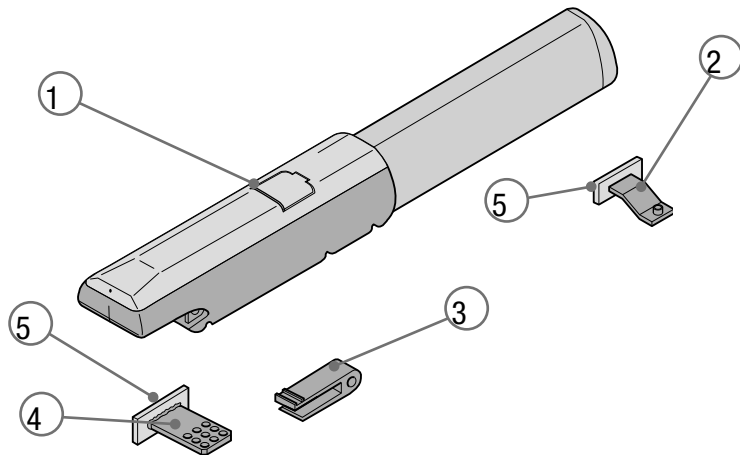
Control board power supply: 230 A.C. 50/60Hz  
 Motor power supply: 24V D.C. 50/60Hz  
 Max draw.: 10A  
 Power: 120W  
 Opening time (90°): adjustable

Gear ratio: 1/36  
 Duty Cycle: Intensive use  
 Protection Rating: IP44  
 Weight:  
 A3024N = 10 kg  
 A5024N = 11 kg



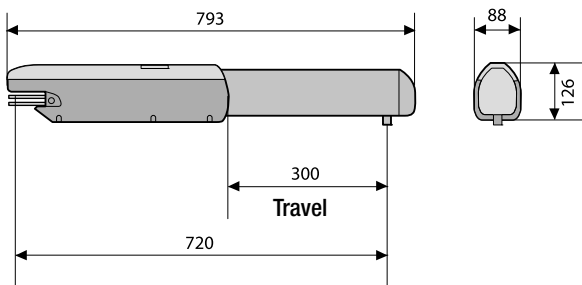
## Description of parts

- 1) Gearmotor
- 2) Front bracket
- 3) Back swivel-joint
- 4) Back bracket
- 5) Anchoring plate

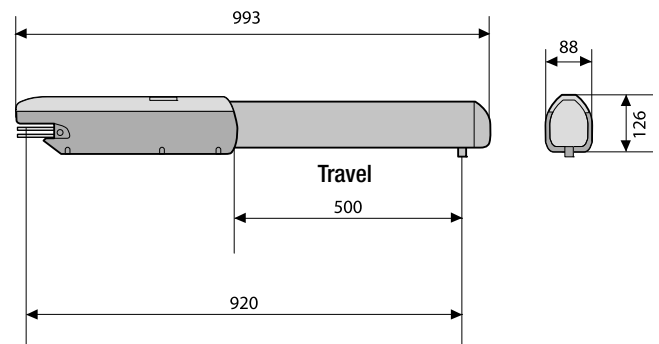


## 4.4 Overall dimensions

A3024N




A5024N

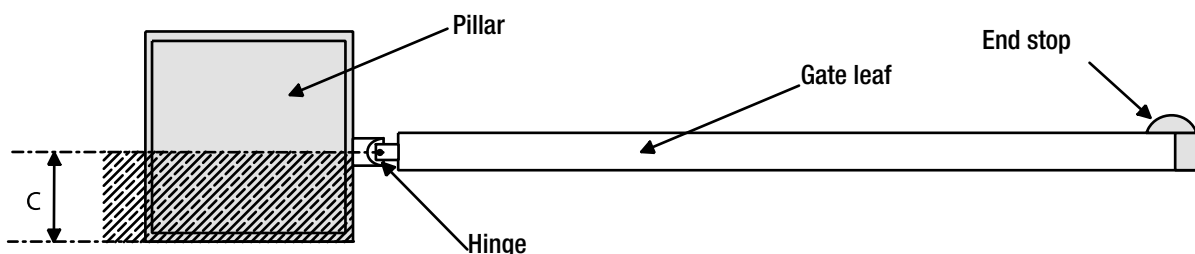


## 5 Installation

### 5.1 Preliminary checks

**⚠** Before installing, do the following:

- make sure the structure of the gate is sturdy, the hinges work and that there is no friction between moving parts and non-moving parts;
- measurement C cannot be greater than the value shown in Tab. 3, p. 5. In this case you need to work on the pillar until said measurement is obtained;
- the path of the electrical cables must comply with the command and safety instructions;
- there must be a soundly secured to the ground mechanical stop to prevent the gate leaf/gearmotor from over extending.
-  Any connections inside the case (that provide continuance to the protective circuit) must be fitted with extra insulation as compared to the other conductive part inside;
- Make sure you have suitable tubing and conduits for the electrical cables to pass through and be protected against mechanical damage.



## Tools and materials

Make sure you have all the tools and materials you will need for the installation at hand to work in total safety and compliance with the current standards and regulations. The following figure illustrates the minimum equipment needed by the installer.



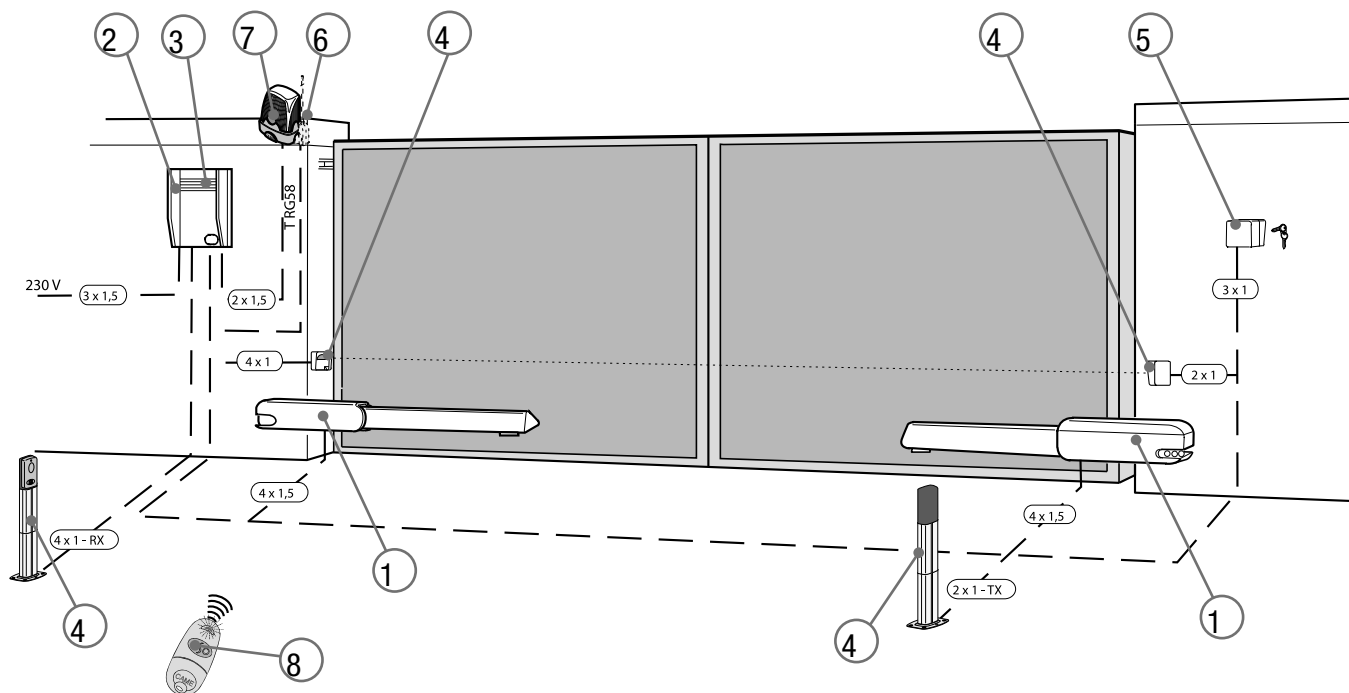
## Cable list and minimum thickness

Connections	Type of cable	Length of cable 1 < 10 m	Length of cable 10 < 20 m	Length of cable 20 < 30 m
Control panel power supply 230V	FROR CEI 20-22 CEI EN 50267-2-1	3G x 1,5 mm <sup>2</sup>	3G x 2,5 mm <sup>2</sup>	3G x 4 mm <sup>2</sup>
Flashing light 24V		3 x 1 mm <sup>2</sup>	3 x 1,5 mm <sup>2</sup>	3 x 2,5 mm <sup>2</sup>
Photocell transmitters		2 x 0,5 mm <sup>2</sup>	2 x 1 mm <sup>2</sup>	2 x 1,5 mm <sup>2</sup>
Photocell receivers		2 x 0,5 mm <sup>2</sup>	2 x 0,5 mm <sup>2</sup>	2 x 0,5 mm <sup>2</sup>
24V Accessories power supply		4 x 0,5 mm <sup>2</sup>	4 x 0,5 mm <sup>2</sup>	4 x 0,5 mm <sup>2</sup>
Command buttons		2 x 0,5 mm <sup>2</sup>	2 x 0,5 mm <sup>2</sup>	2 x 1 mm <sup>2</sup>
Endstop		2 x 0,5 mm <sup>2</sup>	2 x 0,5 mm <sup>2</sup>	2 x 0,5 mm <sup>2</sup>
Encoder plug		3 x 0,5 mm <sup>2</sup>	3 x 1 mm <sup>2</sup>	3 x 1,5 mm <sup>2</sup>
Antenna connection	RG58	max. 50 m		

N.B.: If the cable length differs from that specified in the table, then you must determine the proper cable diameter in the basis of the actual power draw by the connected devices and depending on the standards specified in CEI EN 60204-1.

For connections that require several, sequential loads, the sizes given on the table must be re-evaluated based on actual power draw and distances.

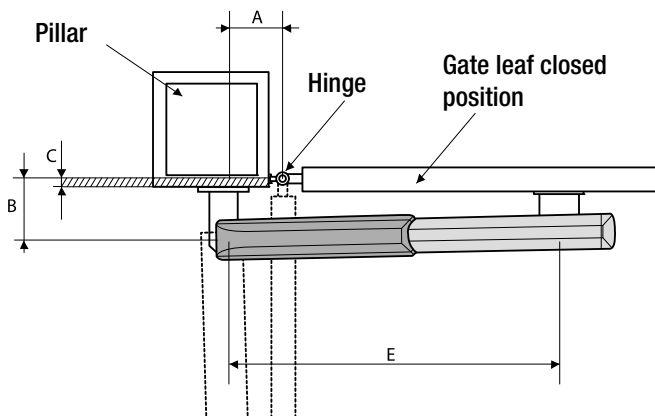
## Standard installation



- |                   |                    |
|-------------------|--------------------|
| 1) Operator       | 5) Selector switch |
| 2) Control panel  | 6) Antenna         |
| 3) Radio receiver | 7) Flashing light  |
| 4) Photocells     | 8) Transmitter     |

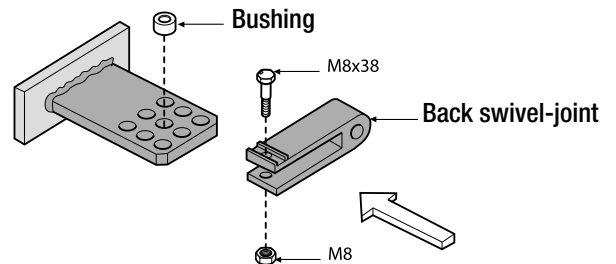
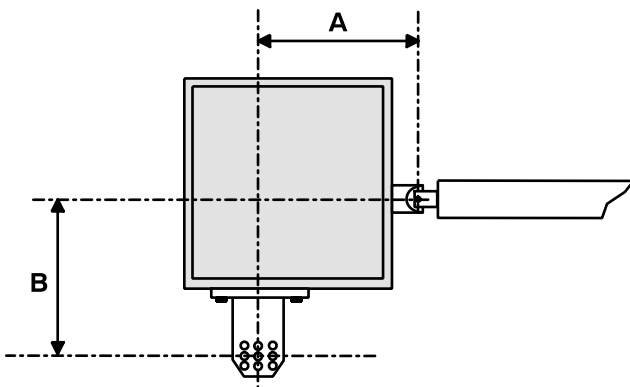
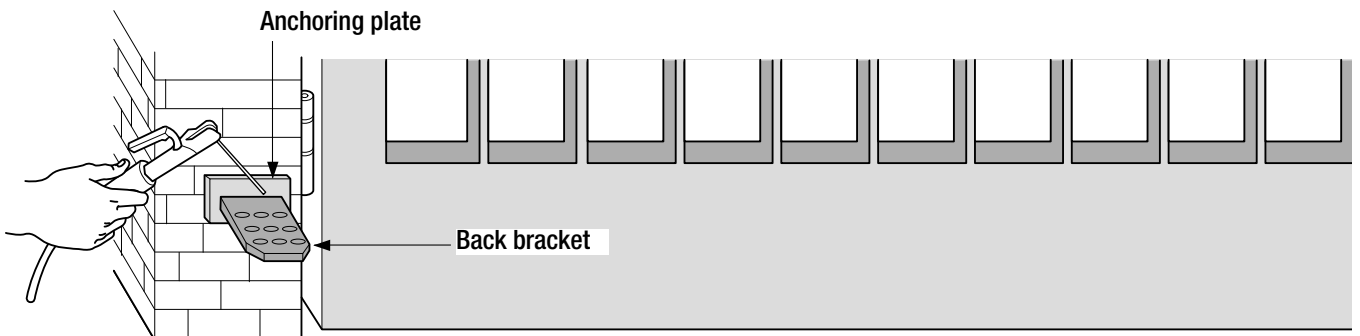
## Mounting

**⚠** The following are just example applications, given that the space for securing the operator and accessories may vary depending on the dimensions. It is thus up to the installer to choose the most suitable solution.



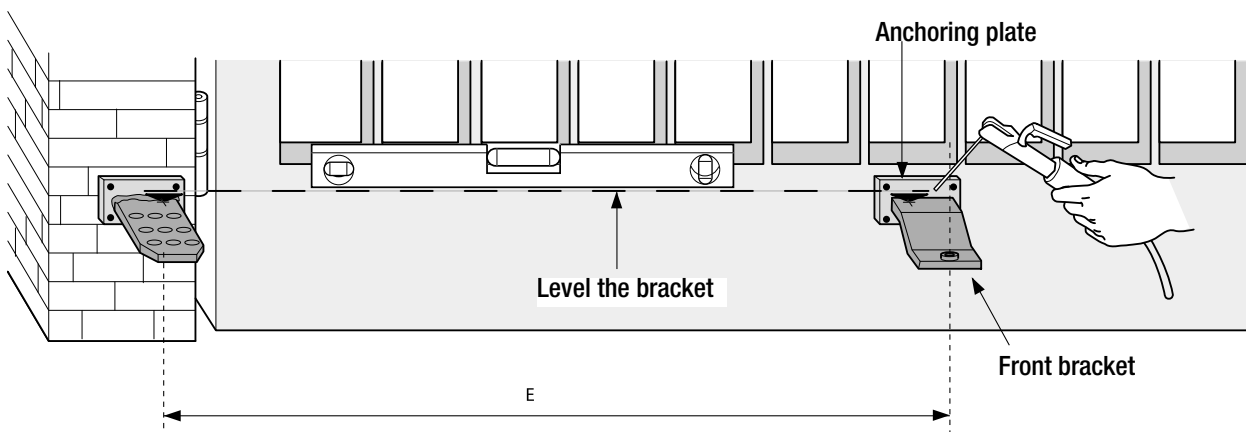
Tab. 3

Gate leaves < 3 m				
Opening	A mm	B mm	C < mm	E mm
90°	130	130	60	720
120°	130	110	50	720
Gate leaves < 5 m				
90°	200	200	120	920
120°	200	140	70	920

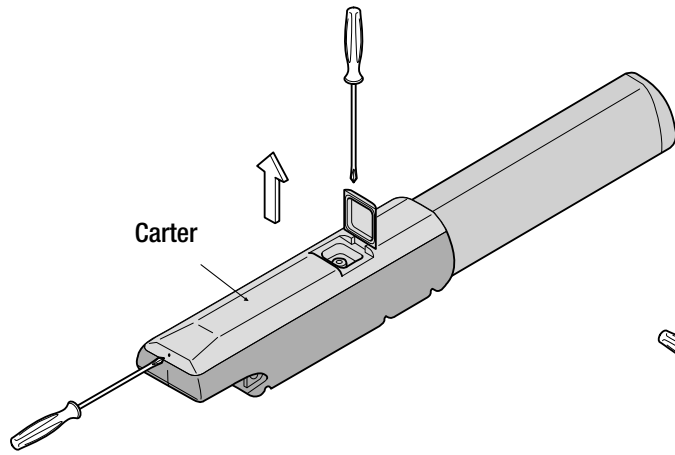


Apply the anchoring plate to the pillar using the back bracket (fig. 1) making sure the A and B measurements are right (Tab. 3) between the hinge axis and central bore hole on the bracket. The back bracket has several other holes for changing the opening angle of the gate.

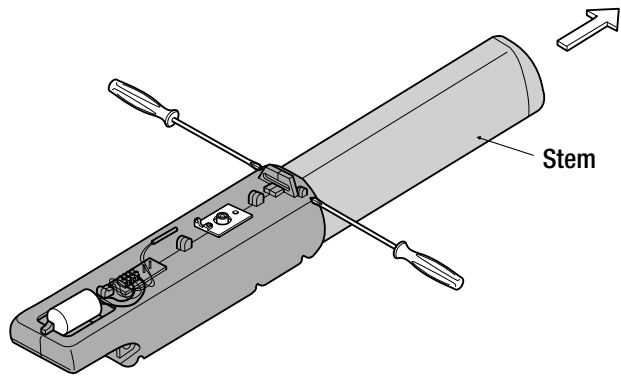
N.B.: increasing the B measurement decreases the opening angle resulting in slower peripheral speed and greater motor thrust on the gate leaf. Increasing measurement A increases the opening angle resulting in greater peripheral speed and reduced motor thrust on the gate leaf.



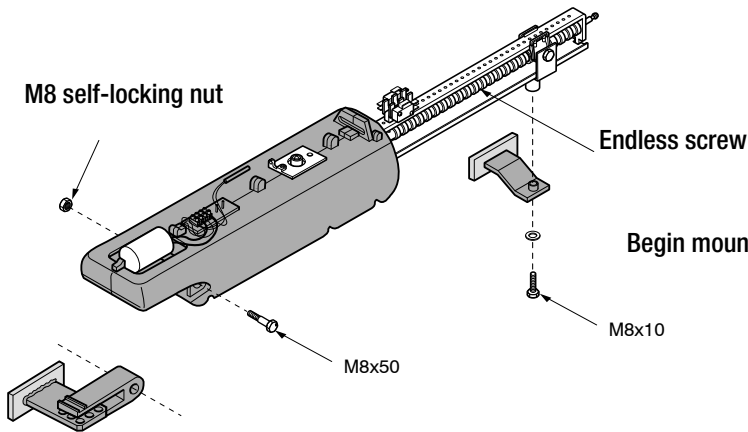
With the gate closed apply the anchoring plate to the gate leaf, making sure that the front bracket is lined up horizontally with the back bracket and ensuring that measurement E is met.



Unscrew the two securing screws and remove the carter.



Unscrew the two securing screws and remove the stem.



Begin mounting the gearmotor to the two brackets.

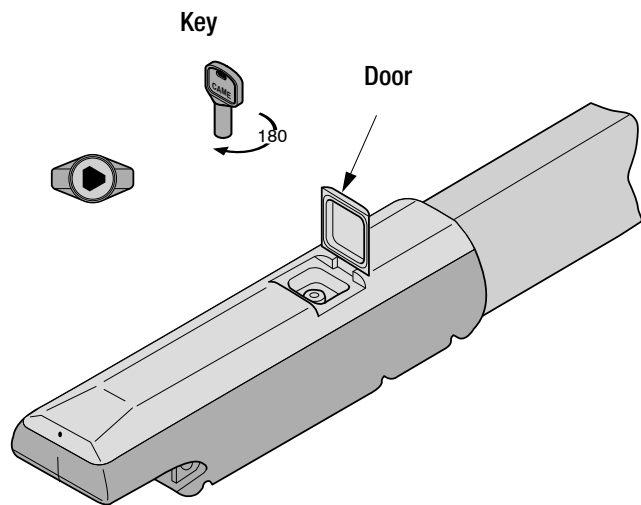
N.B.: we suggest lubricating (using neutral grease) the endless screw and the bushing upon installation.

### Release with customised key

Release only with motor stopped:

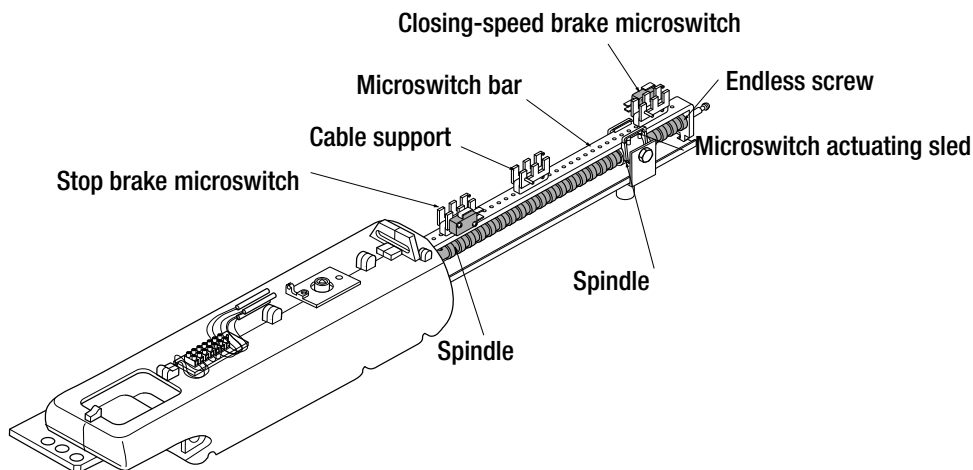
- 1) raise the door;
- 2) insert and turn key which immediately releases door;
- 3) manually push or pull gate leaf.

To lock gate leaf again into place just insert key again and turn.





## Securing and adjusting the endstop



### OPENING PHASE: (stop)

Release the gearmotor and swing the gate-leaf to the fully open position you desire, then, unscrew the securing screws on the opening stop micro-switches assembly.

Slide the micro-switch assembly along the micro-switch bar until it is inserted by contact on the micro-switch activating sled

Secure the micro-switch assembly using the respective screws.

### CLOSING PHASE (deceleration)

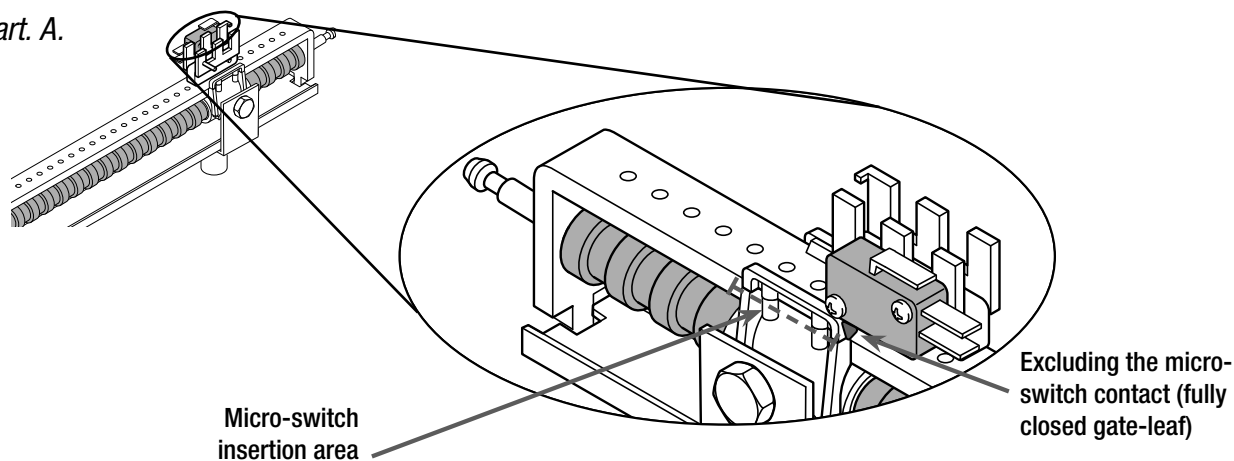
Swing the gate until fully closed.

Unscrew the securing screws on the closing deceleration micro-switch assembly.

Slide the micro-switch assembly along the micro-switch bar until it is completely passing the contact point on the micro-switch activating sled (as shown in part A.)

Secure the micro-switch assembly using the respective screws.

### Part. A.



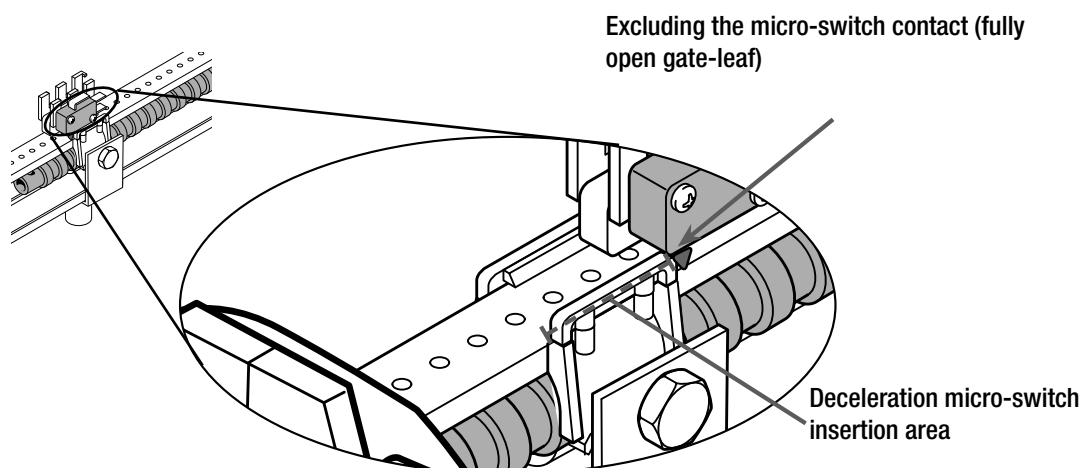
### OPENING PHASE (deceleration if set up on the control panel):

Release the gearmotor and swing the gate-leaf to the fully open position you desire, then, unscrew the securing screws on the opening stop micro-switches assembly.

Slide the micro-switch assembly along the micro-switch bar until it is completely passing the contact point on the micro-switch activating sled (as shown in part B.).

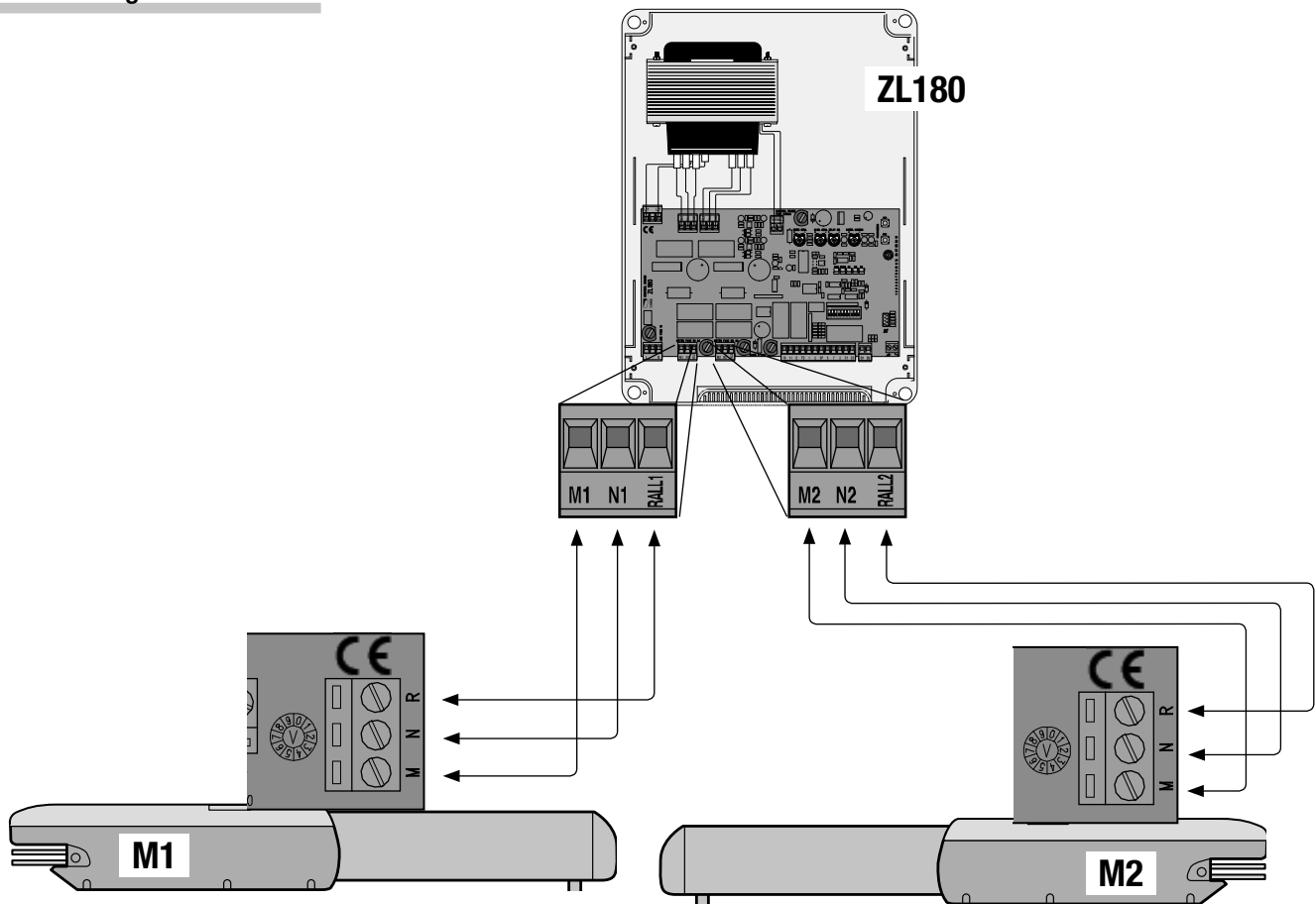
Secure the micro-switch assembly using the respective screws.

### Part. B.

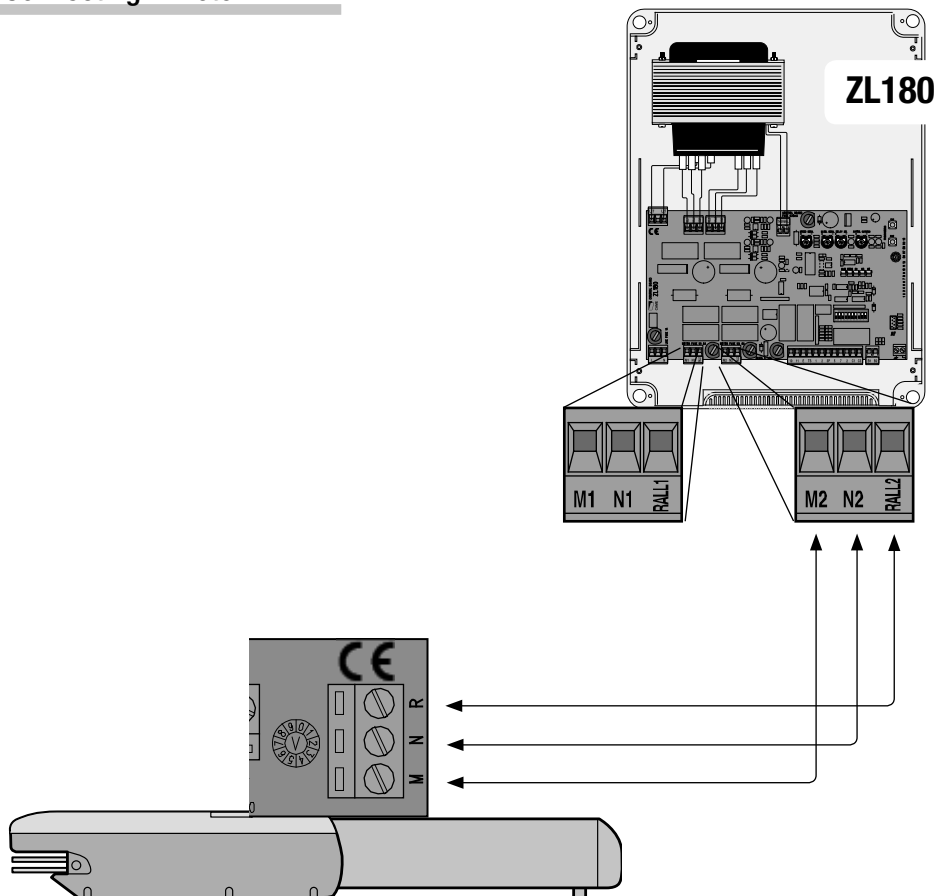


## Connecting to the ZL180 control panel

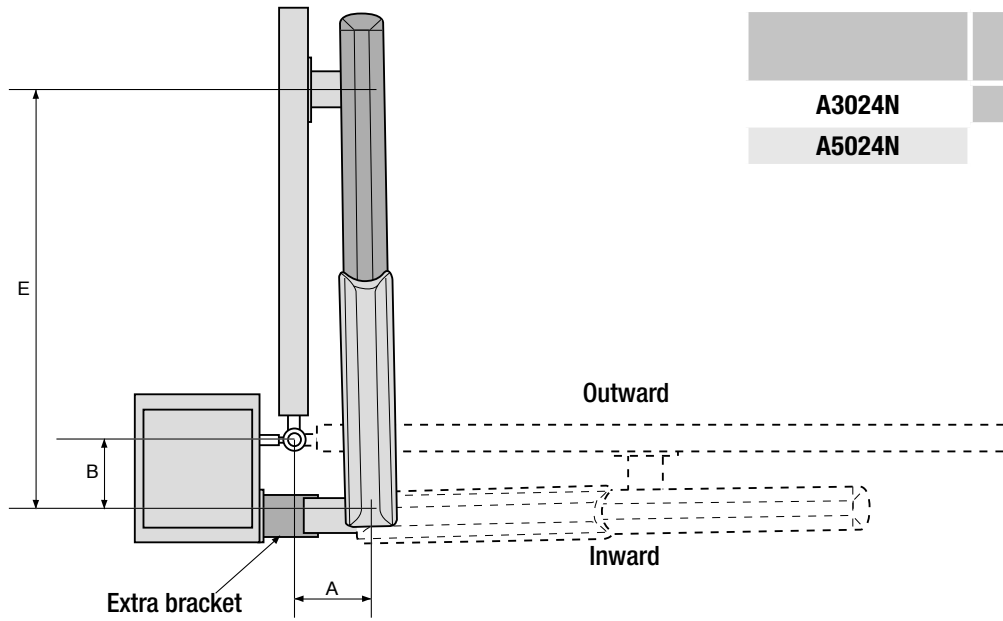
### Connecting 2 motors



### Connecting 1 motor



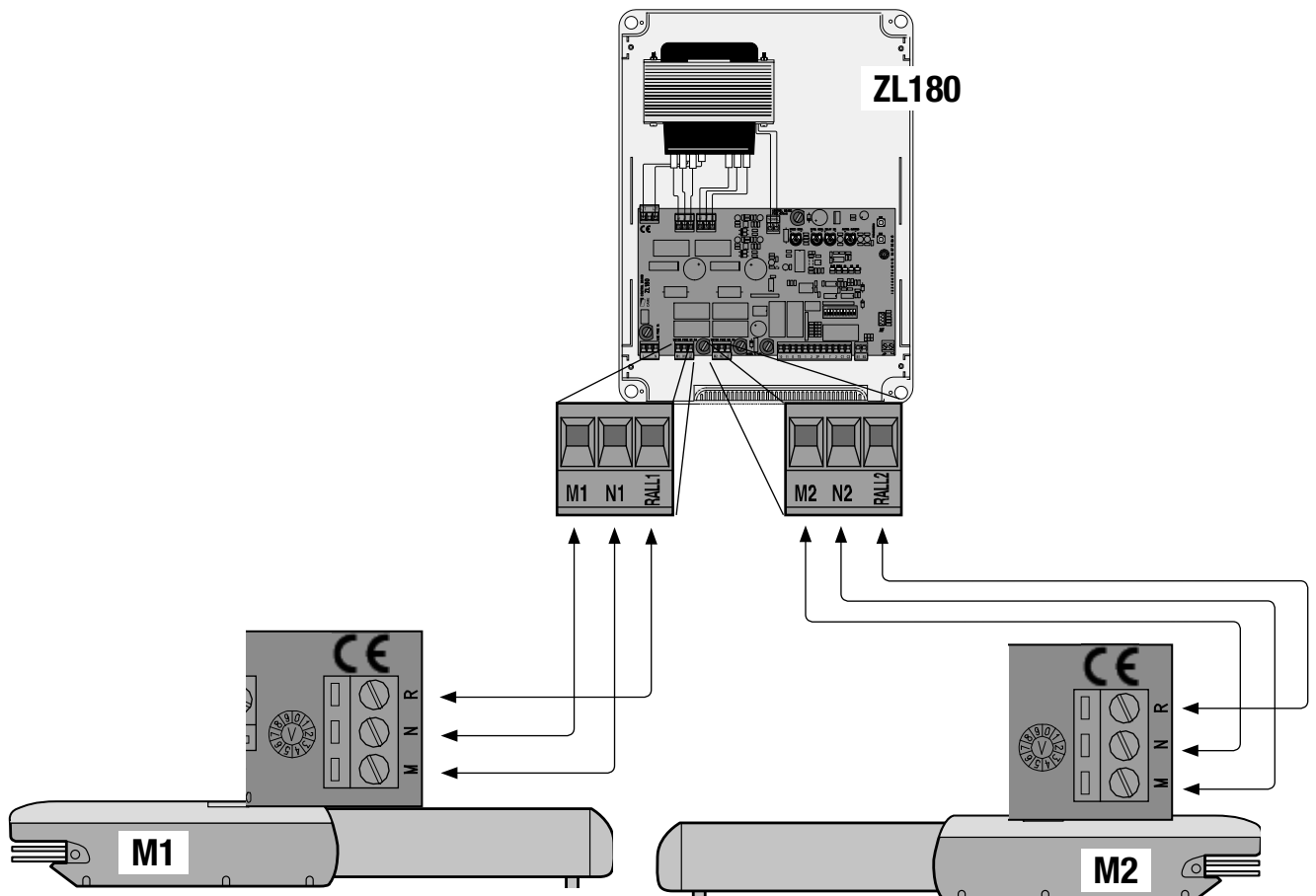
## Application for outward opening



Tab. 4

	A mm	B mm	E mm
A3024N	130	130	720
A5024N	200	200	920

- Measure values A and B (Tab. 4)
- Secure the tail bracket to an extra bracket and apply to post.
- Open gate (max 90°), measure value E (Tab. 4) and secure head bracket to gate leaf.
- Perform electrical connections;
- Reposition and adjust openin stop microswitch.

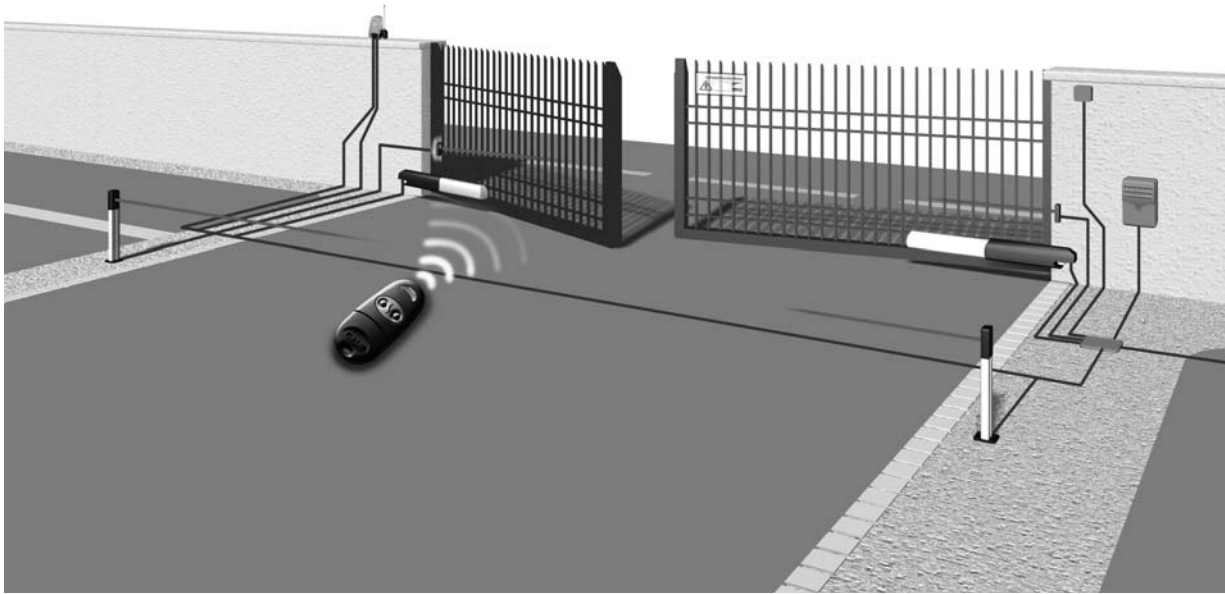


## Safety instructions

### Important safety instructions

This product must only be employed for its originally intended use. Any other use is wrong and potentially dangerous. The manufacturer cannot be held liable for any damages resulting from wrongful, erroneous or negligent uses.

Avoid working close to the hinges or other moving mechanical parts. Stay out of the opening/closing arc when operator is in motion. Do not exercise force against the motion of the operator as this could result in potentially dangerous situations.



Do not allow children to play or loiter within the opening/closing arc of the operator. Keep transmitters and any other command device out the reach of children, to prevent operator from being activated by accident. In the event of anomalous behaviour, stop using the operator immediately.



Danger of crushing hands



Danger! High voltage




Danger of crushing feet



No transit during operation

# Maintenance

## Periodic maintenance

 Periodic maintenance to be carried out by the end-user is as follows: wipe clean the glass surface of the photocells; check that the safety devices work properly; remove any obstructions.

We suggest checking the state of lubrication and tightness of the anchoring screws on the operator.

To check the efficiency of the safety devices, move an object in front of the photocells when gate is closing. If the operator inverts the motion or stops, the photocells are working properly.

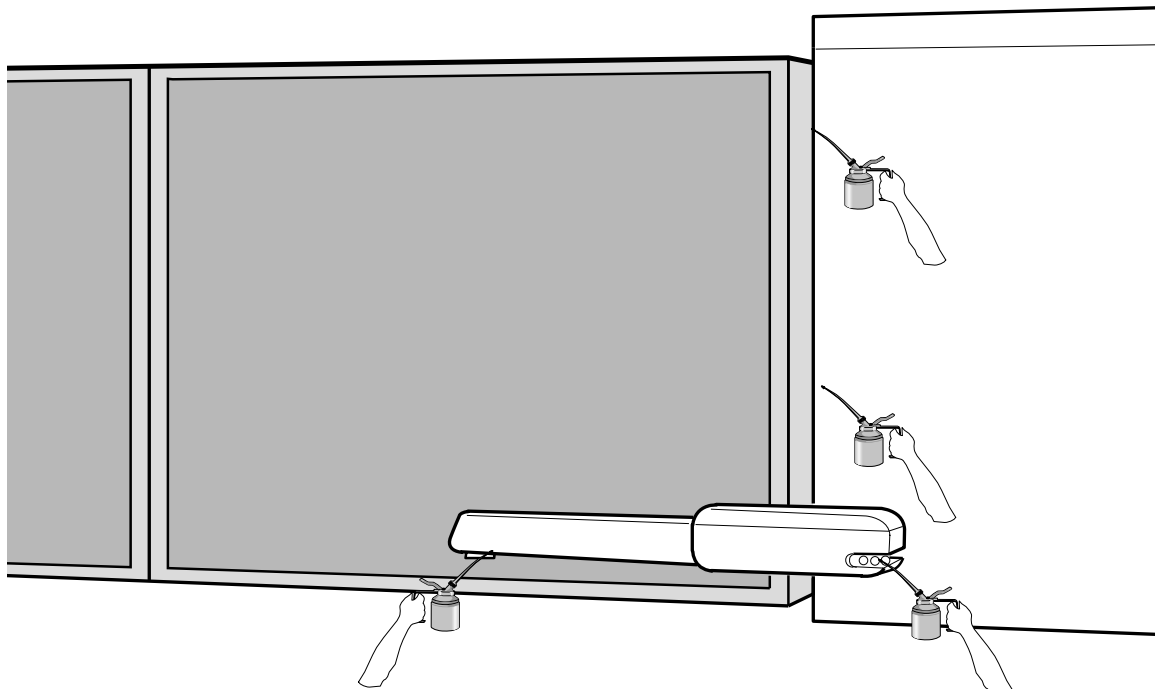
This is the only maintenance procedure to be carried out with the power source connected.

Before performing any maintenance procedures, cut off the main power, to prevent possible accidents due to gate movement.

To clean the photocells use a water dampened cloth. Do not use solvents or other chemical products which may ruin the devices.

In the event of any strange vibrations or squeaking, lubricate the joints with grease, as shown in the diagram.

Make sure there are no plants within the photocell's beam, and that the gate motion is free of any obstacles.



## Trouble shooting

MALFUNCTIONS	POSSIBLE CAUSES	CHECK AND REMEDIES
The gate will not open nor close	<ul style="list-style-type: none"><li>• There is no power</li><li>• The gearmotor is released</li><li>• The transmitter's batteries are run down</li><li>• The transmitter is broken</li><li>• The stop button is either stuck or broken</li><li>• The opening/closing button or the keyswitch are stuck</li></ul>	<ul style="list-style-type: none"><li>• Check that the power is up</li><li>• Lock gearmotor (Chapt. 5.6)</li><li>• Replace batteries</li><li>• Call assistance</li><li>• Call assistance</li><li>• Call assistance</li></ul>
The gate opens but will not close	<ul style="list-style-type: none"><li>• The photocells are engaged</li></ul>	<ul style="list-style-type: none"><li>• Check that photocells are clean and in good working order</li><li>• Call assistance</li></ul>
The flashing light does not work	<ul style="list-style-type: none"><li>• The bulb is burnt</li></ul>	<ul style="list-style-type: none"><li>• Call assistance</li></ul>



Pag. 13 - Manual code: 119DU25 ver. 1.0 01/2011 © CAME cancelli automatici s.p.a. - The data and information reported in this installation manual are susceptible to change at any time and without obligation on CAME cancelli automatici s.p.a. to notify users.

Installer's stamp	Operator name
	Date of job
	Technician's signature
	Requester's signature
Job performed _____ _____ _____	

Installer's stamp	Operator name
	Date of job
	Technician's signature
	Requester's signature
Job performed _____ _____ _____	

### Phasing out and disposal

CAME CANCELLI AUTOMATICI S.p.A. employs a UNI EN ISO 14001 certified and compliant environmental protection system at its plants, to ensure that environmental safeguarding. We ask you to keep protecting the environment, as CAME deems it to be one of the fundamental points of its market operations strategies, by simply following these brief guidelines when disposing:

**DISPOSING THE PACKING MATERIALS**

The packing components (cardboard, plastic, etc.) are solid urban waste and may be disposed of without any particular difficulty, by simply separating them so that they can be recycled.

Before actions it is always advisable to check the pertinent legislation where installation will take place.

**DO NOT DISPOSE OF IN NATURE!**

**DISPOSING OF THE PRODUCT**

Our products are made using different types of materials. The majority of them (aluminium, plastic, iron, electric cables) can be considered to be solid urban waste. They may be recycled at authorised firms.

Other components (electrical circuit board, remote control batteries etc.) may contain hazardous waste.

They must, thus, be removed and turned in to licensed firms for their disposal.

Before acting always check the local laws on the matter.

**DO NOT DISPOSE OF IN NATURE!**

### Conformity declaration



#### MANUFACTURER'S DECLARATION OF CONFORMITY

Pursuant to annex II B of the Machinery Directive 98/37/EC



**CAME Cancelli Automatici S.p.A.**  
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--- STANDARDS ---

EN 13241-1	EN 12635	EN 61000-6-2
EN 12453	EN 12978	EN 61000-6-3
EN 12445	EN 60335-1	

Declares under its own responsibility that the equipments for automatic garage doors and gates listed below :

**A3024N / A5024N**

... comply with the National Law related to the following European Directives and to the applicable parts of the following Standards.

--- DIRECTIVES ---

98/37/CE - 98/79/CE	MACHINERY DIRECTIVE
98/336/CEE - 92/31/CEE	ELECTROMAGNETIC COMPATIBILITY DIRECTIVE
73/23/CEE - 93/68/CE	LOW VOLTAGE DIRECTIVE
89/106/CEE	CONSTRUCTION PRODUCTS DIRECTIVE

**IMPORTANT WARNING!**

Do not use the equipment specified here above, before completing the full installation in full compliance with the Machinery Directive 98/37/EC

MANAGING DIRECTOR  
Mr. Andrea Menuzzo

Reference code to request a true copy of the original: **DDF B EN A001C**



English - Manual code: 119DU25 ver. 1.0 01/2011 © CAME cancelli automatici s.p.a.  
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