

AUTOMATION FOR SWING GATES

AMICO SERIES



INSTALLATION MANUAL

A1824

“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”



1 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.

2 Intended use and application

2.1 Intended use

The A1824 operator is designed to automate swing gates used in residential or condominium settings..



The use of this product for purposes other than those described above and installation executed in a manner other than as instructed in this technical manual are prohibited.

2.2 Application

Length of gate leaf	1 m	1,5 m	1,8 m
Weight of gate leaf	250 kg	215 kg	200 kg

3 Reference Standards

The company CAME cancelli automatici s.p.a. is ISO 9001:2000 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: EN 12978, UNI EN 954-1, CEI EN 60335-1, UNI EN 12453.

4 Description

4.1 Gate Operator

This product is engineered and manufactured by CAME cancelli automatici s.p.a. and complies with current safety regulations. Guaranteed 24 months if not tampered with.

The gearmotor is made up of two aluminium alloy half shells housing the Encoder gearmotor – which features an electric blocking mechanism – and an epicyclical reduction system with endless screw.

4.2 Technical features

Control board power supply: 230V A.C. 50/60Hz

Motor power supply: 24V D.C.

Max draw: 4A

Power: 100W

Adjustable thrust: 400÷2000N

Opening time (90°): Adjustable

Gear ratio: 1/36

Duty Cycle: Intensive use

Protection Rating: IP44

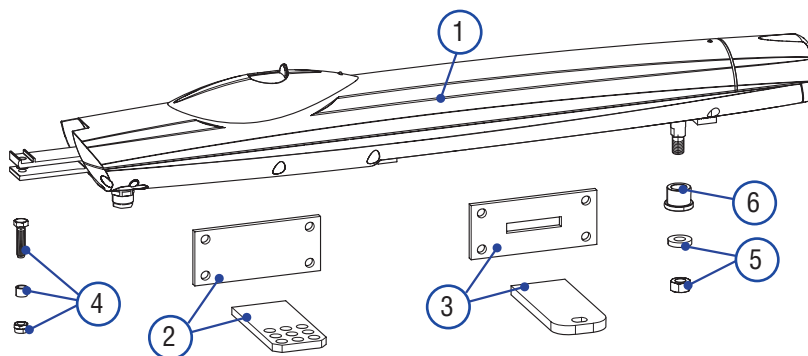
Weight: 7,5 kg



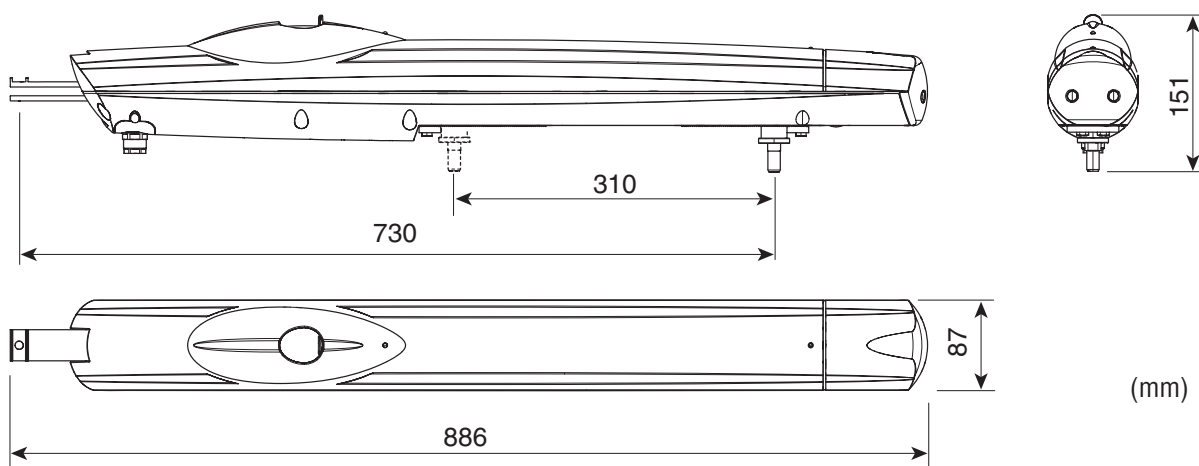
4.3 Description of parts

A1824

- 1) Operator
- 2) Pilaster bracket
- 3) Gate bracket
- 4) Screw, bushing and nut for the pilaster bracket
- 5) Bolt and nut for the gate bracket
- 6) Distanziale per perno attacco



4.4 Dimensions



5 Installation

- ⚠ Installation must be carried out by expert qualified personnel and in full compliance with current regulations.

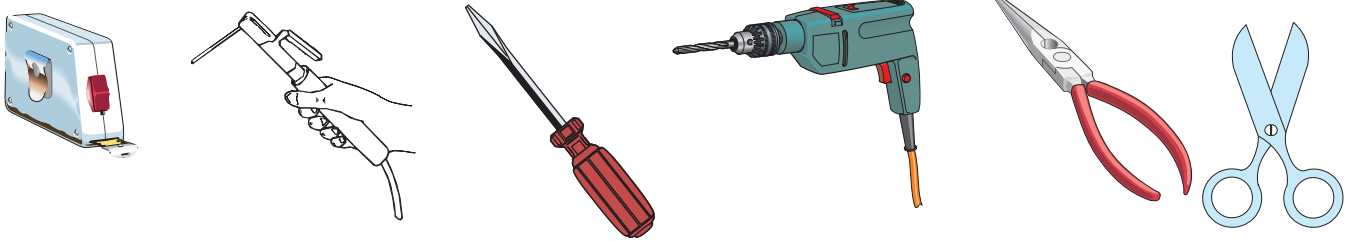
5.1 Preliminary checks

- ⚠ Before installing, do the following:

- Make sure you have suitable tubing and conduits for the electrical cables to pass through and be protected against mechanical damage;
- Fit tubing to drain away any water leaks which may cause oxidation;
- ⊕ Make sure that any connections inside the case (that provide continuance to the protective circuit) be fitted with extra insulation as compared to the other conductive parts inside;
- Make sure the structure of the gate is sturdy, the hinges work and that there is no friction between moving and non-moving parts;
- Make sure there is a mechanical stop for opening and closing.

5.2 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.



5.3 Cable list and minimum thickness

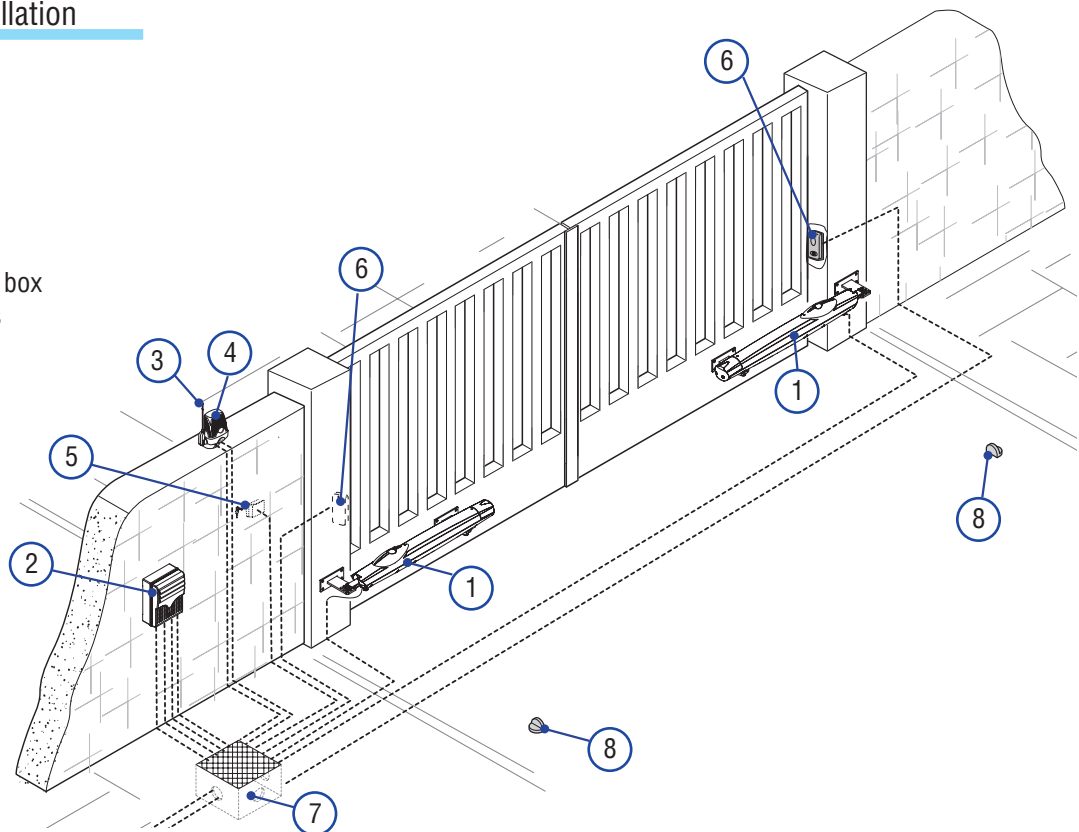
Connections	Type of cable	Length of cable 1 < 10 m	Length of cable 10 < 20 m	Length of cable 20 < 30 m
Control panel power supply 230V	FROR CEI 20-22 CEI EN 50267-2-1	3G x 1,5 mm ²	3G x 2,5 mm ²	3G x 4 mm ²
Motor power supply 24V		3 x 1 mm ²	3 x 1,5 mm ²	3 x 2,5 mm ²
Flashing light		2 x 0,5 mm ²	2 x 1 mm ²	2 x 1,5 mm ²
Photocell transmitters		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Photocell receivers		4 x 0,5 mm ²	4 x 0,5 mm ²	4 x 0,5 mm ²
Accessories power supply		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 1 mm ²
Control and safety devices		2 x 0,5 mm ²	2 x 0,5 mm ²	2 x 0,5 mm ²
Antenna	RG58	max. 10 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.

When connecting products that are not specified in this manual, please follow the documentation provided with said products.

5.4 Standard installation

- 1) A1824 operator
- 2) Control panel
- 3) Reception antenna
- 4) Flashing light
- 5) Selector switch
- 6) Photocells
- 7) Electric cable junction box
- 8) Mechanical gate stops

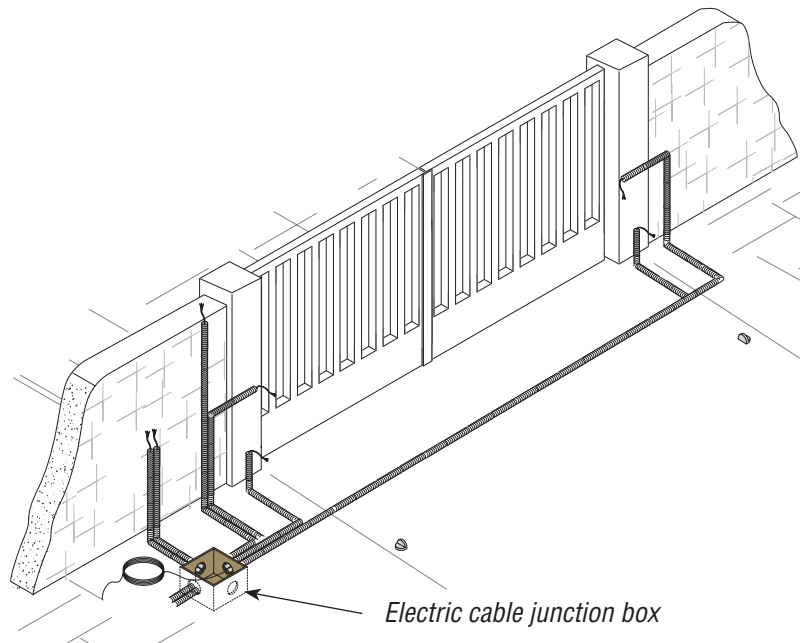


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5.5 Installing the operator

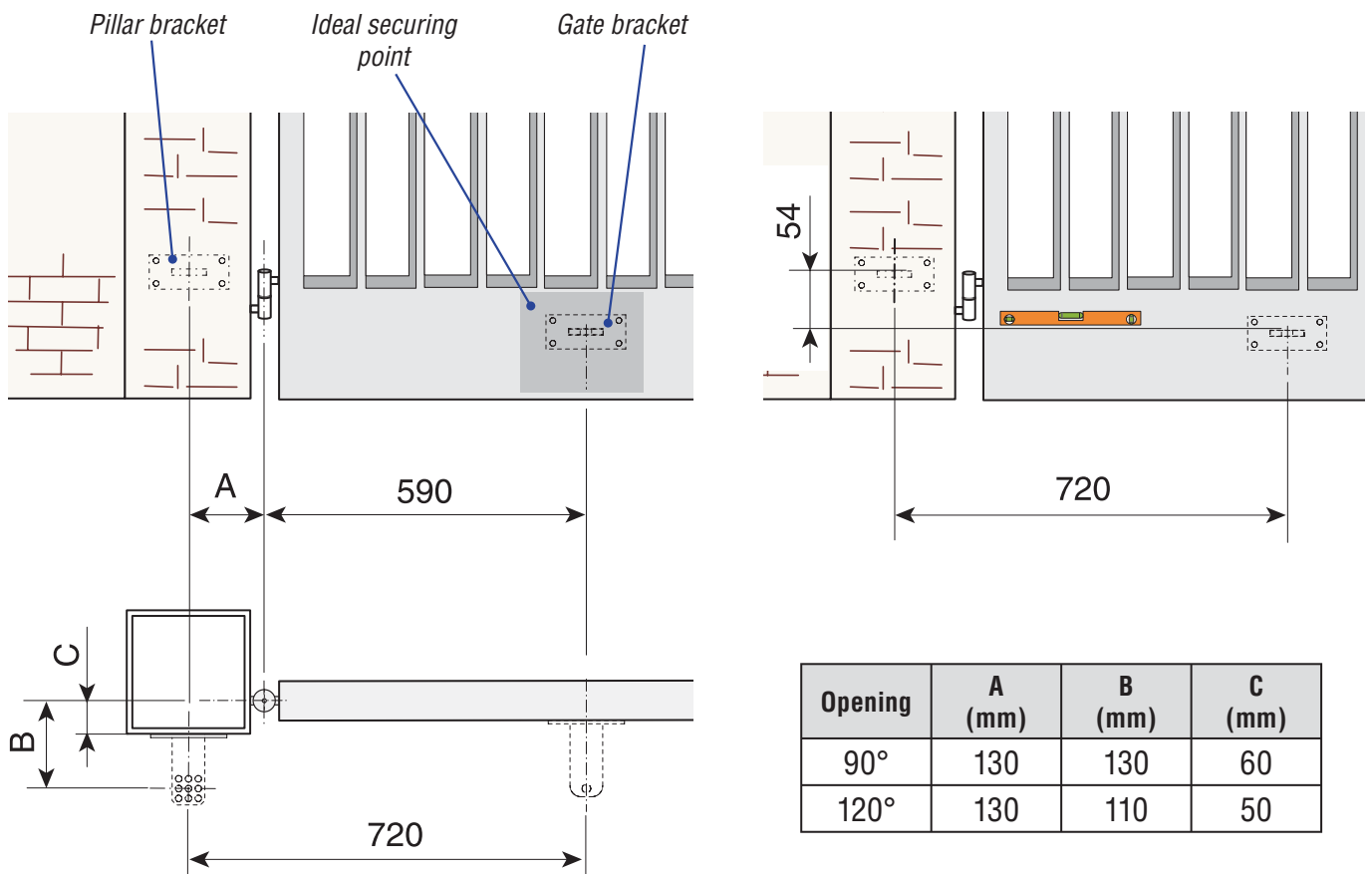
⚠ The following illustrations are only examples, given that the space available for anchoring the operator and accessories may vary from gate to gate. It is up to the installer, thus, to choose the most suitable solution.

Lay the corrugated tubing needed for the connections deriving from the junction box.
N.B. the number of tubes depends on the type of system and accessories employed.

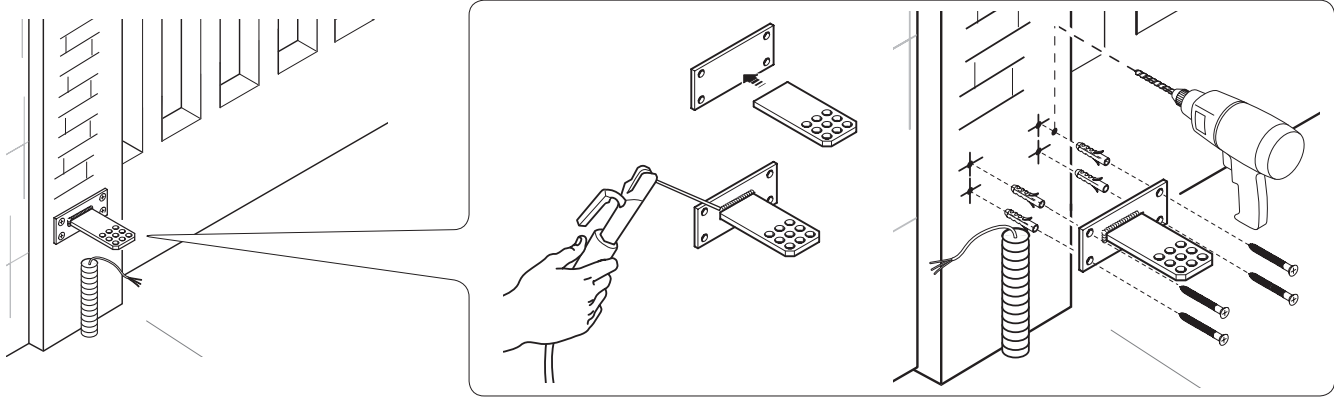


Warning: after establishing the best point to which you will secure the gate bracket, secure the bracket to the pillar and make sure the quotas shown in the table below are met.

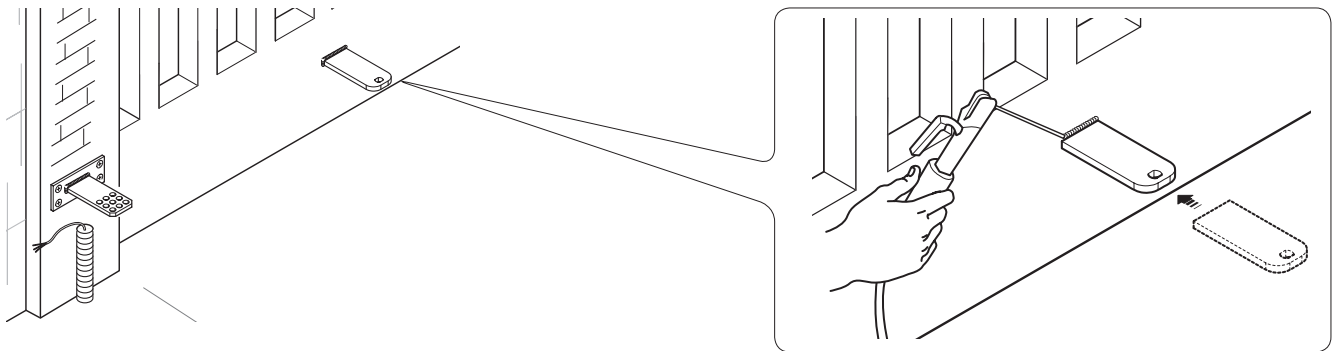
Note: by increasing measure B, the opening angle and gate speed are reduced, while the gearmotor thrust is increased. By increasing the measure A, the opening angle and gate speed are increases, while the gearmotor thrust is decreased.



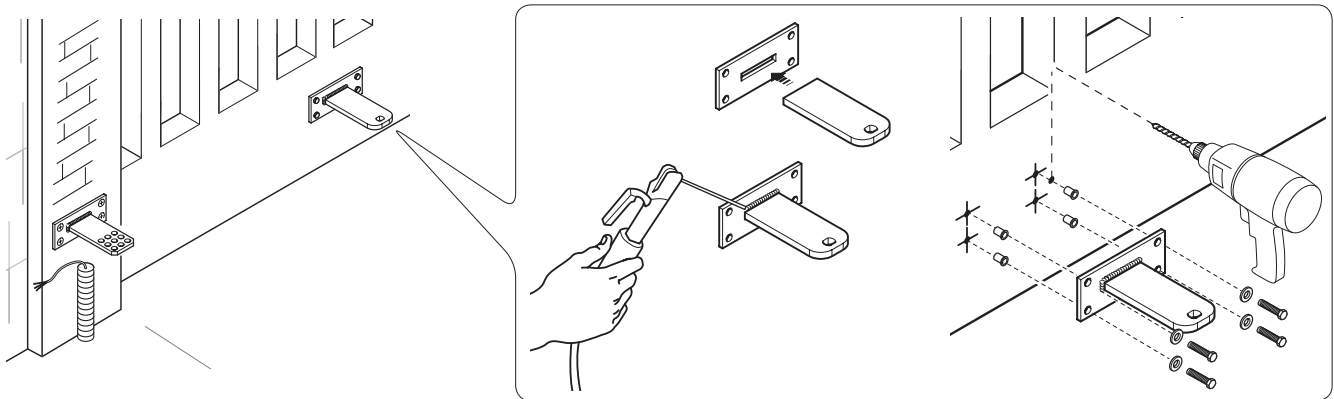
Assemble and weld the two parts of the pillar bracket. Secure the bracket to the point you have chosen with proper plugs and screws or – if the pillar is made of metal – weld it on.



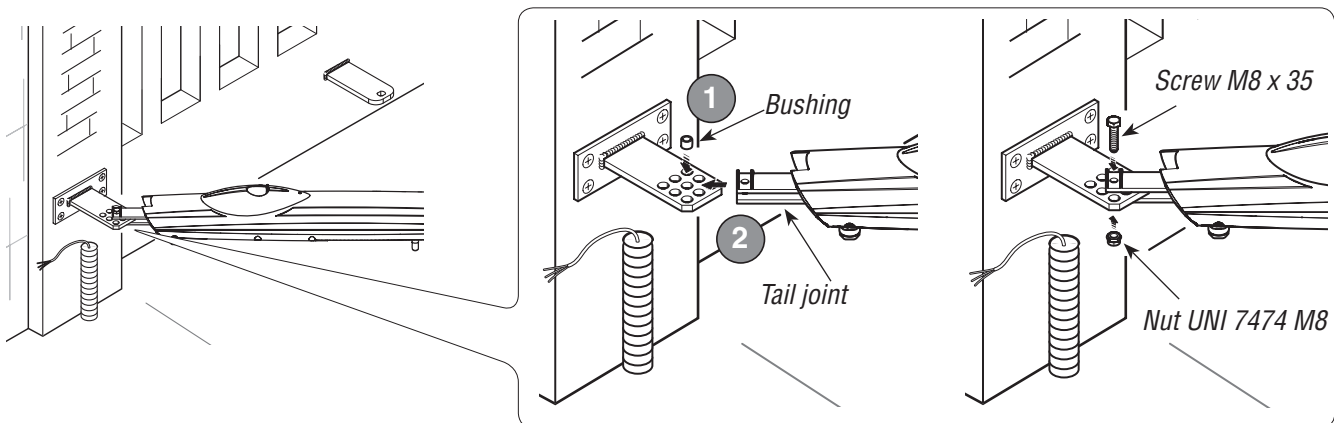
Weld the gate bracket to the gate leaf making sure the quotas shown in the table are met.



Note: on non-metal gate leaves assemble and weld the two parts of the bracket and secure them with proper screws. Secure the

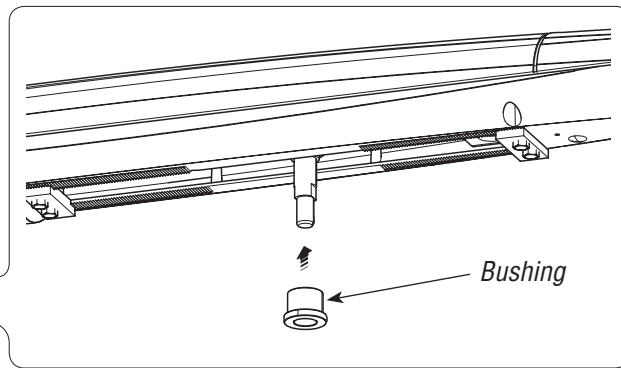
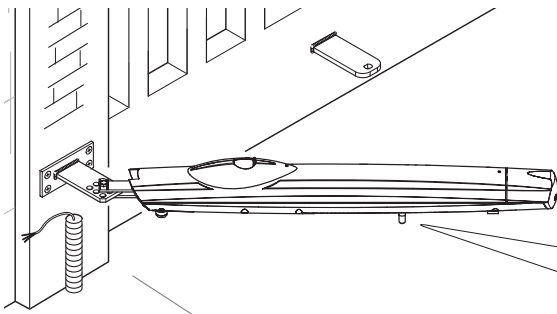


Insert the bushing (lubricated) into the pillar bracket's hole. The bracket has holes that allow the opening angle to be changed. Secure the tail joint to the bracket.

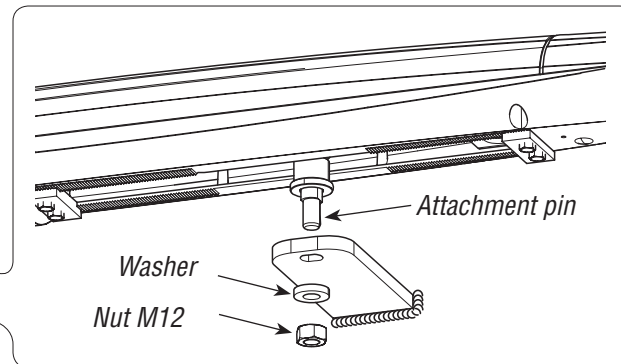
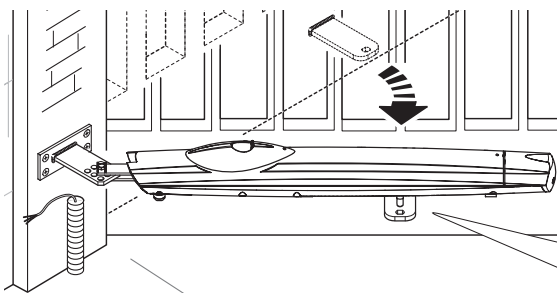


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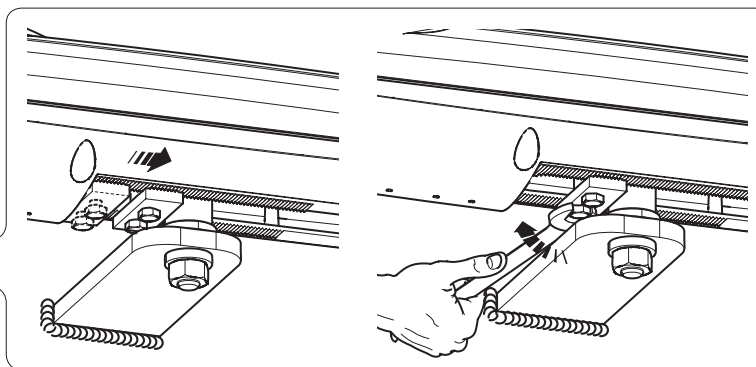
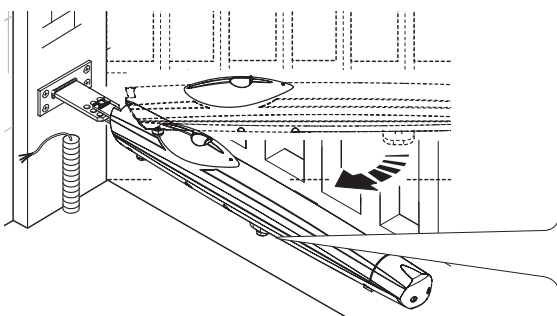
Insert the bushing into the head attachment pin.



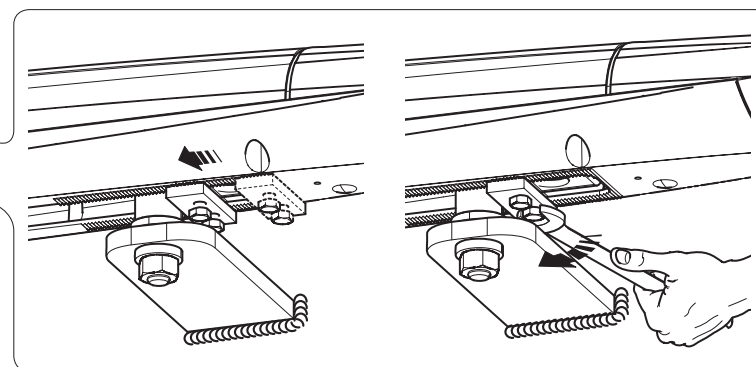
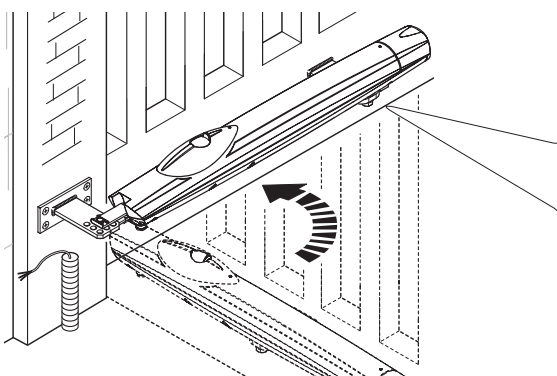
Open the gate leaf and insert the pin into the gate bracket.



Release the gearmotor (see paragraph on manual release), completely open the gate leaf, loosen the nuts of the opening mechanical stop and position it up against the attachment pin, then secure it.



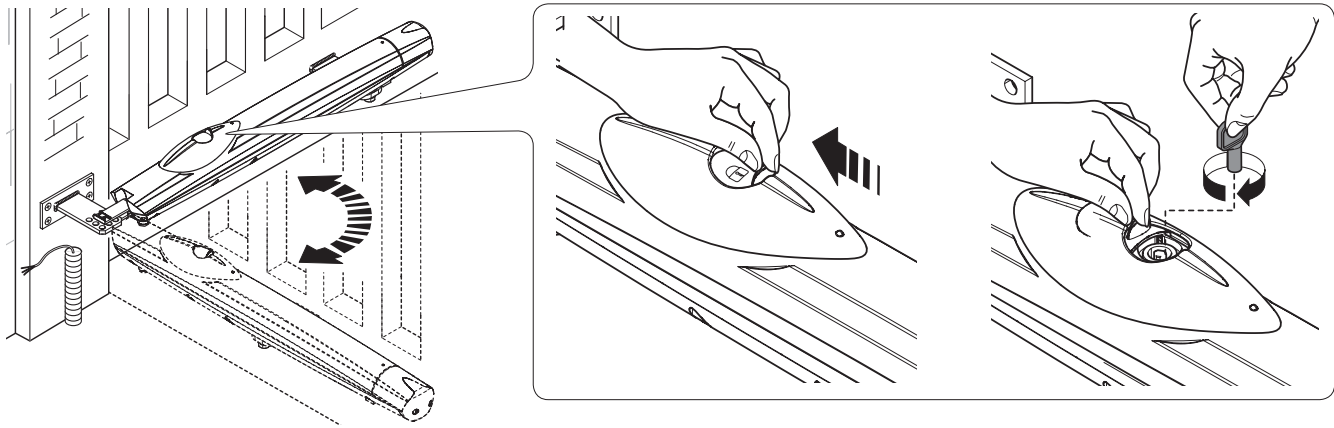
Close the gate leaf, loosen the nuts on the closing mechanical stop, place it up against the attachment pin, then secure it.



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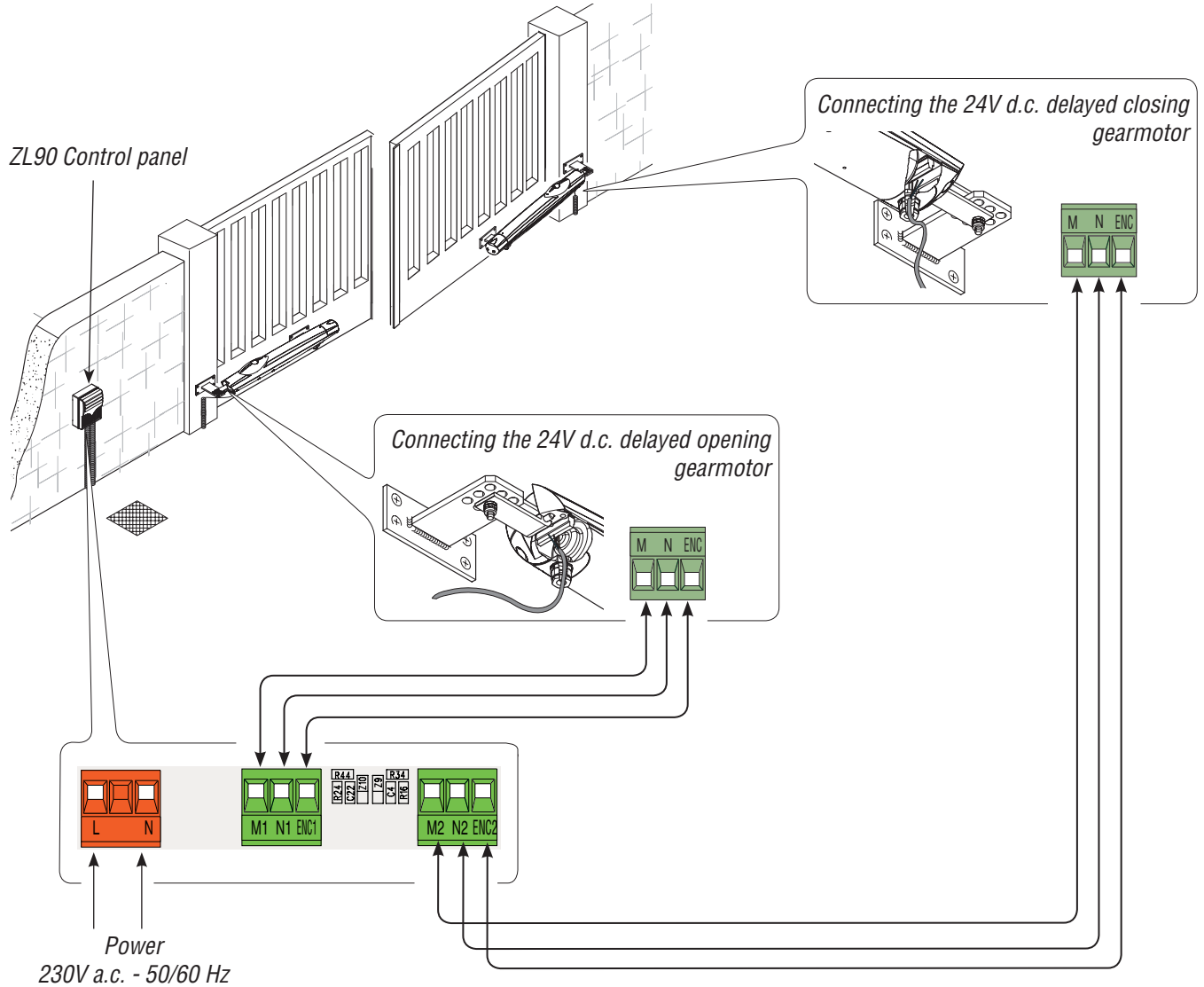
5.6 Manual release of the gearmotor

Slide open the small door that protects the release, insert the tri-lobed key and turn it.



5.7 Connecting to the control panel

For the electrical connection procedures, use the junction box and branching boxes.



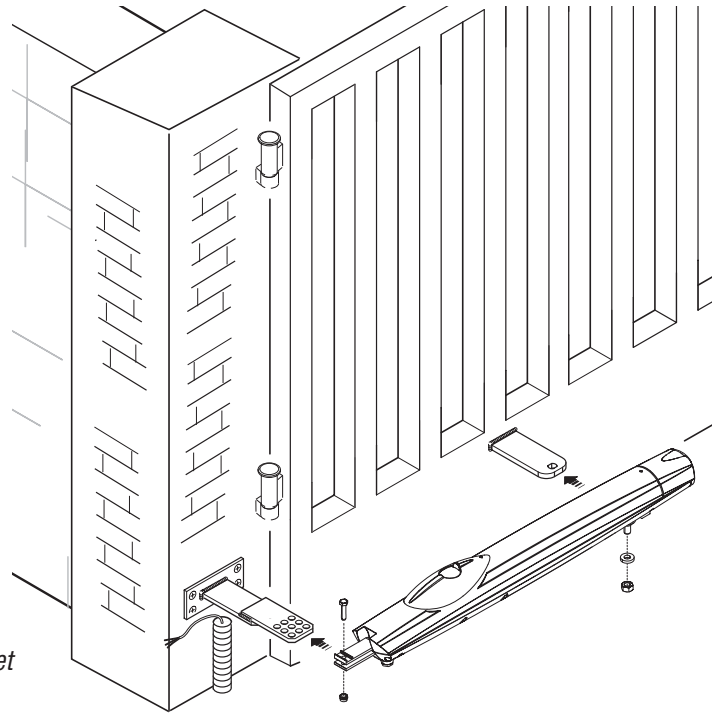
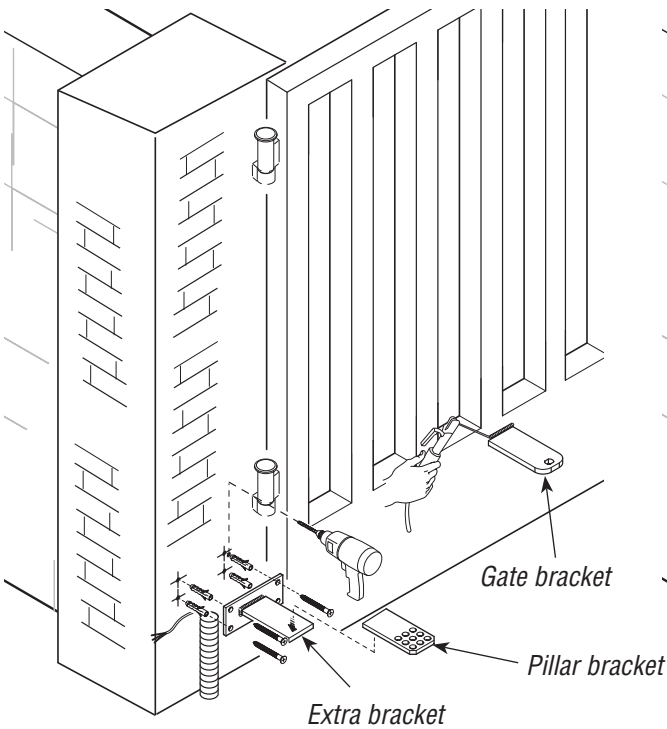
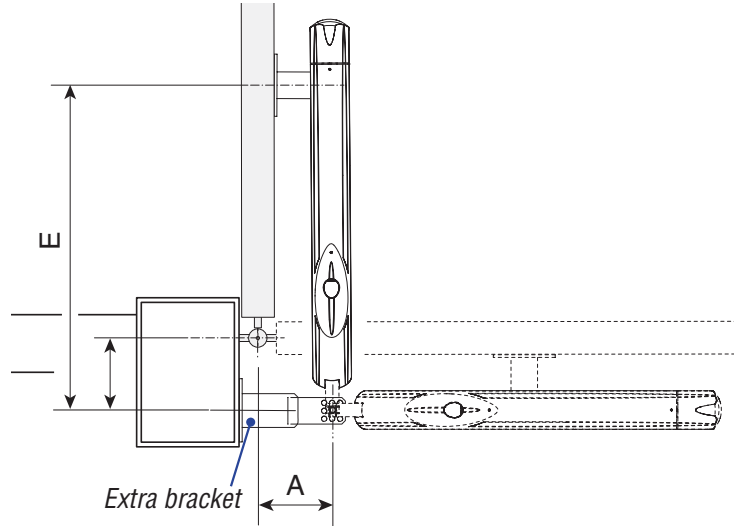
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5.8 Outward opening installation

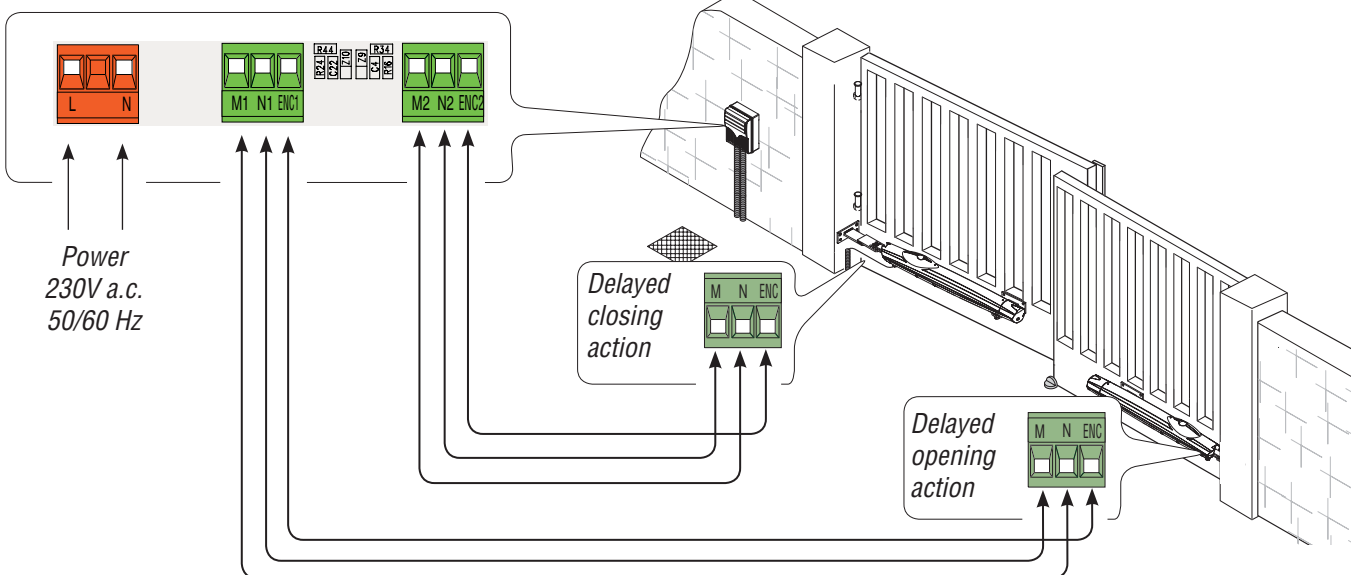
Opening	A (mm)	B (mm)	E (mm)
90°	130	130	720

Weld the extra bracket to that of the pillar, secure the extra bracket to the pillar making sure the A and B quotas are met as shown in the table.

Open the gate to a 90° arc, weld or secure using proper screws the gate bracket making sure the E quota is met. Secure the gearmotor to the brackets.



Connect the gearmotors to the panel as shown in the diagram.



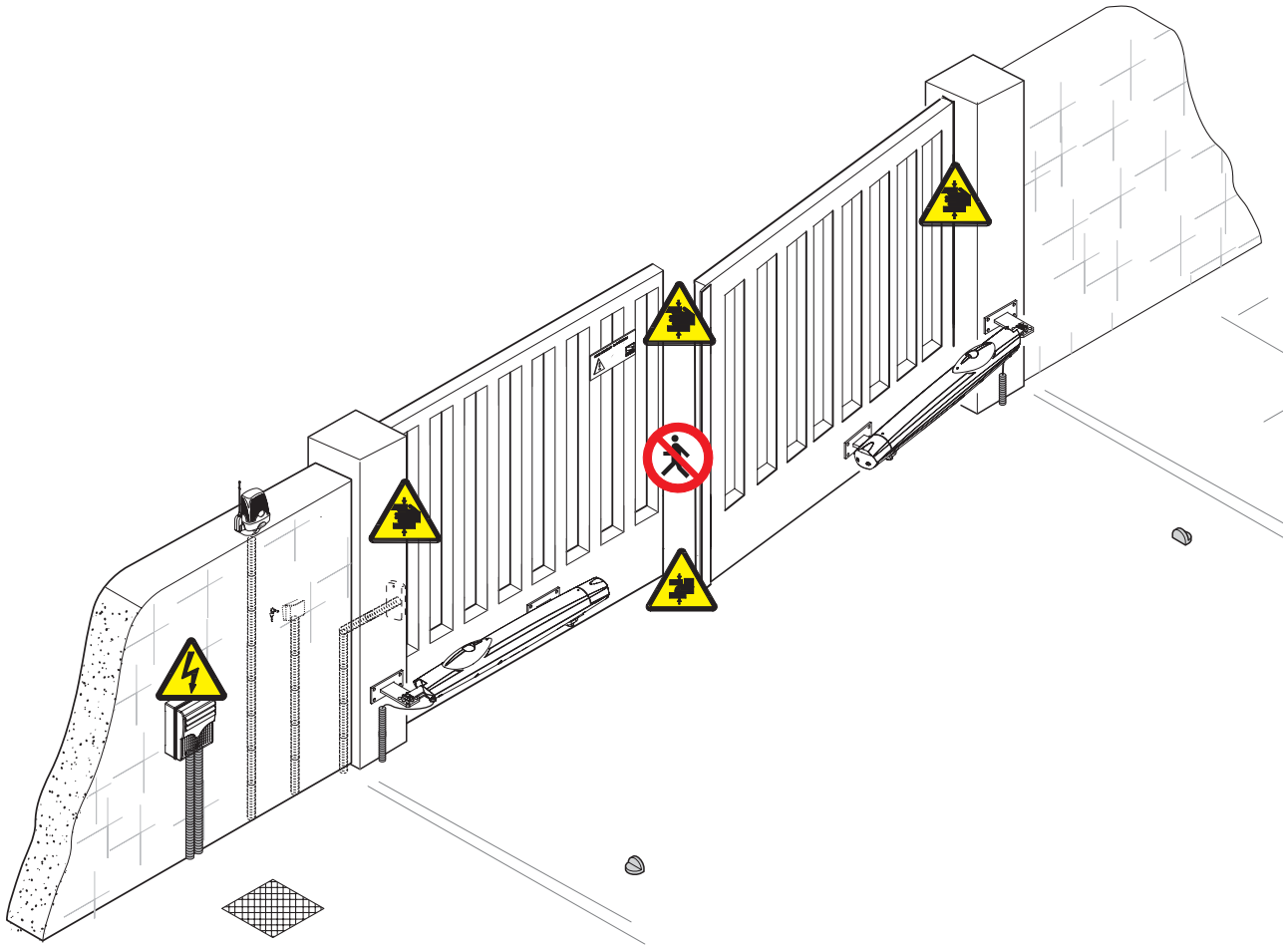
7 Safety instructions

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 remote controls 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

8 Maintenance

8.1 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.

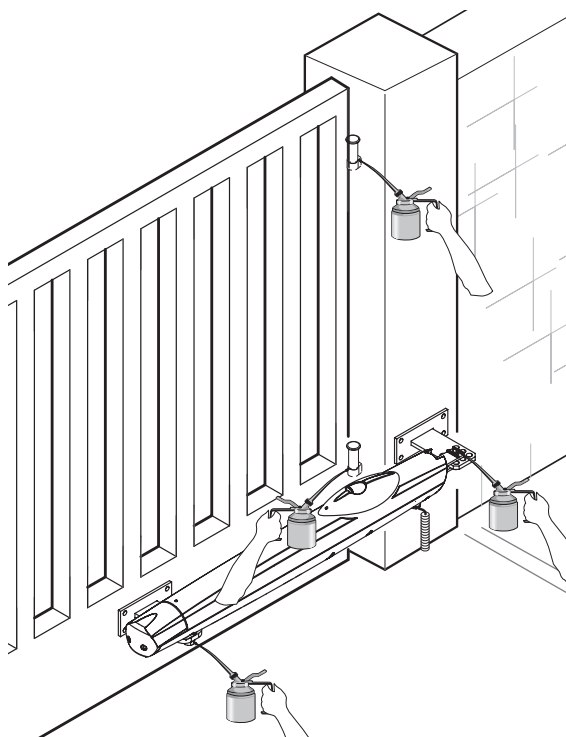
To check the efficiency of the safety devices, move an object in front of the photocells when gate is closing. If the operator inverts the motion or stops, the photocells are working properly.

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.


8.2 Trouble shooting

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

Periodic maintenance log for end-user (every 6 months)

Date	Notes	Signature

8.3 Extra-ordinary maintenance

 The following table serves to note down any extraordinary maintenance, repairs or improvements performed by specialised firms.

N.B.: Any extraordinary maintenance must be performed by specialised technicians.


Extra-ordinary maintenance log

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

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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 _____ _____	

9 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!

10 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.
via Martiri della Libertà, 15
31030 Dosson di Casier - Treviso - ITALY
tel (+39) 0422 4940 - fax (+39) 0422 4941
internet: www.came.it - e-mail: info@came.it

--- STANDARDS ---

EN 13241-1
EN 12453
EN 12445

EN 12635
EN 12978
EN 60335-1

EN 61000-6-2
EN 61000-6-3

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

A1824

... 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
98/336/CEE - 92/31/CEE
73/23/CEE - 93/68/CE
89/106/CEE

MACHINERY DIRECTIVE
ELECTROMAGNETIC COMPATIBILITY DIRECTIVE
LOW VOLTAGE DIRECTIVE
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**

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