



حواجز الطرق

RB

يتوفر لدى مصنع البراك للأبواب مجموعة متكاملة ومتعددة من أجهزة حواجز الطرق تفي بكل الأغراض الصناعية عندما تكون هناك حاجة للتحكم في مرور السيارات وتتميز هذه الأجهزة بالأمان والمثانة والاستخدام الصناعي المستمر.

مكونات النظام :



- ١) الجهاز
- ٢) لوحة التحكم
- ٣) الحاجز الألمنيوم
- ٤) ملصق احمر للحجز الألمنيوم
- ٥) انتل
- ٦) رير لمقاومة الصدمات
- ٧) لمبة تحذيرية عندما يكون الذراع أفقي
- ٨) لمبة تحذيرية عندما يتحرك الذراع
- ٩) مفتاح تشغيل
- ١٠) عمود عدسات
- ١١) عدسات ضوئية للسلامة والأمان
- ١٢) عمود لقارئ البطاقات أو المفاتيح المغネットة
- ١٣) قارئ البطاقات
- ١٤) عمود لساندة حاجز الطريق
- ١٥) نظام الحساسية الأرضي المفتوح لفتح البوابة عند الخروج

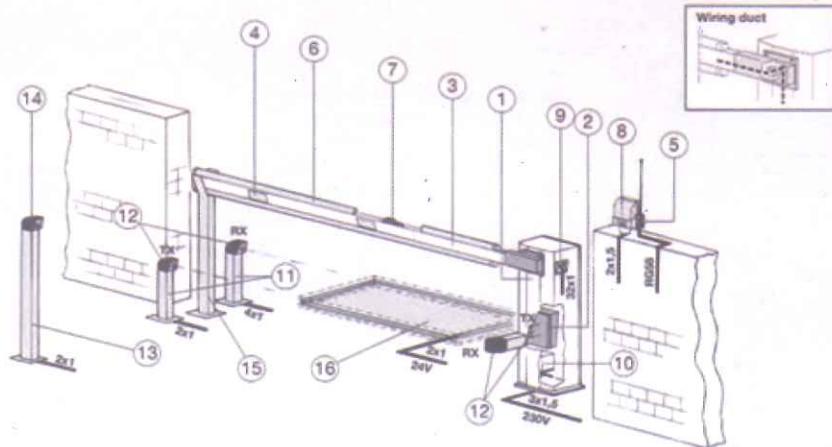


CAME

Approved
Installer

INSTALLATION

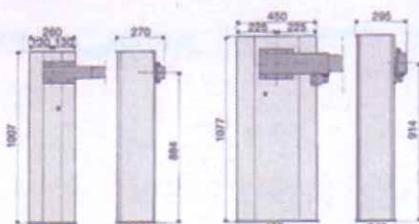
EXTERNAL DIMENSIONS



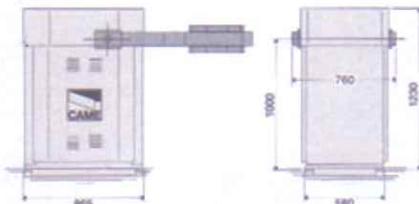
1 - GARD unit
2 - Built-in control panel
Accessories
3 - Aluminum barrier
4 - Red phosphorescent strips

5 - Antenna
6 - Protective rubber rib
7 - Signal lamps
8 - Flashing light indicating barrier movement
9 - Key-operated switch
10 - Emergency battery
11 - Photocell column
12 - Safety photocells
13 - Column for magnetic card reader
14 - Magnetic card reader
15 - Fixed support for barrier
16 - Magnetic sensor

G 2500 G 4000/1 G 6000/1



G 12000



وتنتاز هذه الأنظمة بال التالي

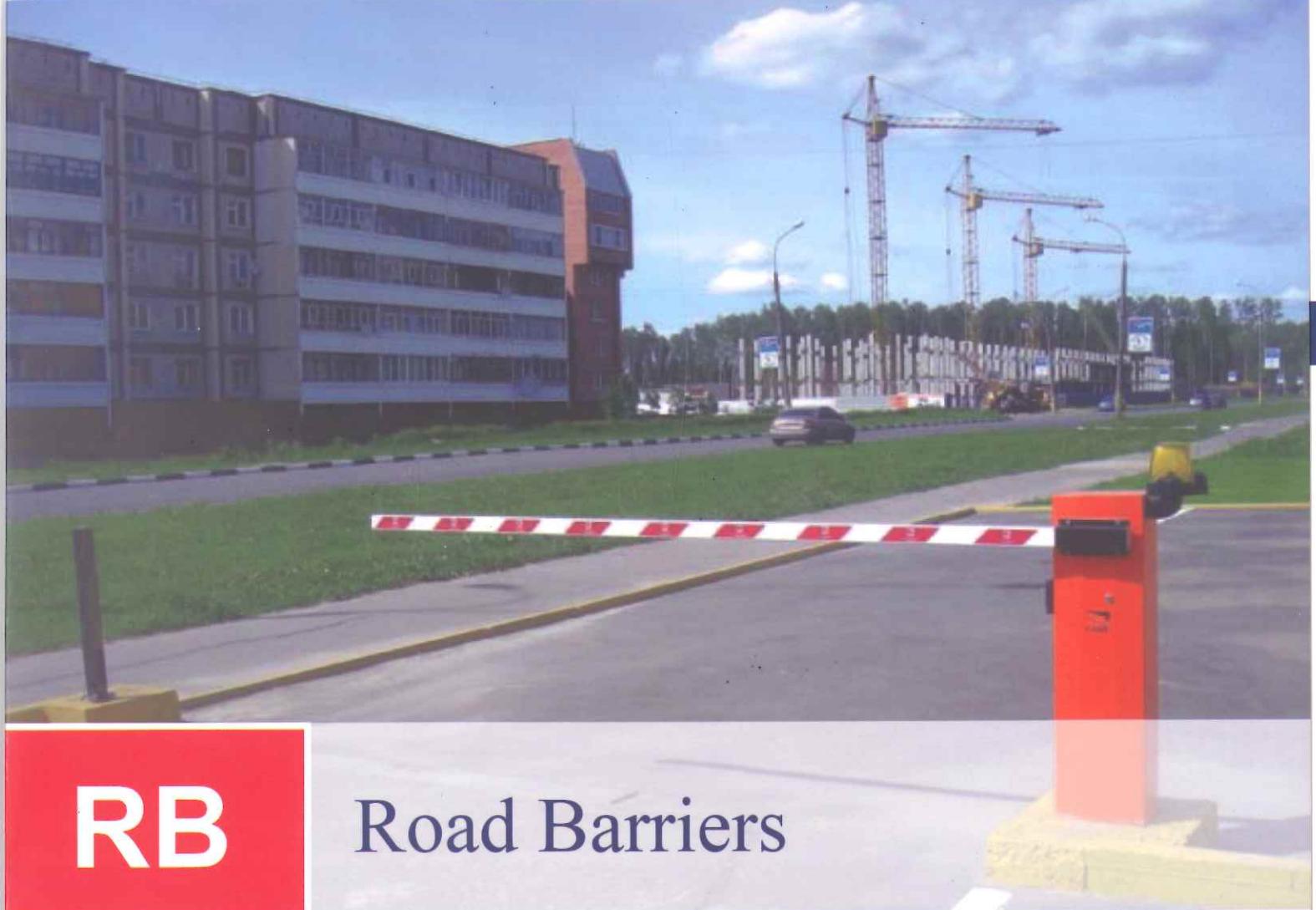
- ١) يعمل هذا النظام بالحركة الميكانيكية الكهربائية (٢٤ VDC) مما يقلل الصيانة الدورية ويعطي حماية للمستخدم والجهاز .
- ٢) قفل إحكام ذاتي يقفل النظام في حالة الإغلاق .
- ٣) يتوفّر بالنظام مفتاح لتحريك الذراع يدويًا عند انقطاع التيار الكهربائي .
- ٤) النظام مزود بلعبة تحذيرية تعمل تلقائياً عند تشغيل النظام بالإمكان التحكم في سرعة حركة الذراع وكذلك السرعة عند بداية نزول وصعود الذراع .
- ٥) يرتد ذراع الجهاز عند النزول واصطدامه بجسم .
- ٦) يتم تشغيل الجهاز بمفتاح تشغيل .
- ٧) سهولة تغيير اتجاه حركة الذراع
- ٨) تأتي بأطوال تتراوح بين ٢ م الى ١٢ م .

هذا بالإضافة إلى الخيارات التالية لعملية التشغيل

- ١) بالإمكان تشغيله بريموت كنترول .
- ٢) بالإمكان تشغيل الجهاز بمفتاح رقمي .
- ٣) بالإمكان تشغيل الجهاز بمفتاح ممغنط .
- ٤) بالإمكان تشغيل الجهاز بكرت ممغنط .
- ٥) بالإمكان تشغيل الجهاز بواسطة العدسات الضوئية وذلك عند الخروج .
- ٦) بالإمكان تشغيل الجهاز الحساسية الأرضي الممغنط وذلك عند الخروج .
- ٧) بالإمكان تزويد النظام ببطارية للطوارئ عند تشغيل الجهاز عند انقطاع التيار الكهربائي



920005339



RB

Road Barriers

Al Barrak's Road Barriers from CAME, Italy. CAME is Europe's leading manufacturer of a complete range of Electro-mechanical automatic gate control systems that comply with the UNI 8612 standard. Top-quality control systems designed for external installation and with no need of periodic maintenance are the basis for the success of CAME products.

Models

Gard – Up to 4 meter

For passages of up to 2.5m and 4m.

The fast automatic barriers are the ideal solution when you need to control and select roads and parking areas in residential and collective settings. They are available with both 230V and 24V motors and also in the special inox steel (rust proof) cabinet version. Ideal for application near the sea or in high traffic areas.

Gard Up to 6 Meter

For passages of up to 6m.

The fast automatic barriers are the ideal solution when you need to control and select roads and parking areas in industrial and collective settings. They are available with both 230V and 24V motors and also in the special ox steel (rust proof) cabinet version. Ideal for application near the sea or in high traffic areas.

Gard Up to 8 Meter

For passages of up to 7.6m.

Gard8 features innovative design features and is the latest in the line of automatic road barriers. It is the ideal solution to control roads and parking areas in industrial and collective settings. It comes in both the 230V and 24V versions.

Gard – Up to 12 meters

For passages of up to 12m.

Specifically designed for large industrial passages, Gard12 is an out-of-the-ordinary operator. This is an exceptional product which is unmatched when it comes to reliability and power. It only comes in the 24V version.



Approved
Installer



Features of Road Barriers

Electromechanical gear motor : does not require periodic maintenance.

Self-locking gear motor : positively locks the barrier in the closed position.

Built-in control panel : supplies 24 VDC to the monitor.

Built-in release system : with key. The lock can easily be changed and unified with those on other Came units.

Configured for easy installation of **control and safety accessories**.

Configured for installation and connection of an **emergency battery**: supplies power to the system in case of power failure.

Available in stainless steel with a satin finish (G 4001/G 6001).

The electronic control system provides (24 V versions):

Adjustment of barrier speed to suit the level of traffic at the installation site.

Adjustment of final approach speed for gentle impact - even when barrier is set to move quickly.

Obstacle detection with stop during closing, thanks to an amperometric obstacle detection system.

FEATURES AND SPECIFICATIONS OF ROAD BARRIER CAME G-4000 (Made in Italy)

Ideal for control of roadway passages, the G 4000 Barrier automation systems offer the added feature of operation with 24V Dc for maximum efficiency as well as greater safety for operator and user.

Features

Electro mechanical gear motor: does not require periodic maintenance.

Self - locking gear motor: positively locks the barrier in the closed position.

Built-in control panel: supplied 24V DC to the motor.

Built-in release system with key: The lock can be changed and unified with those on other Came units.

Configured for easy installation of control and safety accessories.

Configured for installation and connection of an emergency battery.

The electronic control system provides (24 V versions)

- Adjustment of barrier speed to suit the level of traffic at the installation site.
- Adjustment of final approach speed for gentle impact even when barrier is set to move quickly.
- Obstacle detection with stop during closing : Amperometric obstacle detection system.

Materials

Frame in galvanized sheet metal with RAL – 2004 polyester enamel finish and arms in aluminum.

TECHNICAL SPECIFICATIONS: (G-4000)

Type	G – 4000
Weight	47 Kg.
Voltage	230 V AC, 24 V DC
Motor Current	230 V – 1,3 max, 24 V – 15 max
Motor Power	300 W
Duty Cycle	Intensive use
Reduction Ratio	1 / 202 – I
Torque	200 N m
Opening time	2 – 6 S

Installation Materials

1. Gard Unit
2. Built-in control panel
3. Accessories

Aluminum Barrier	Key operated switch (or) Push Button
Red phosphorescent strips	Safety Photocells
Antenna	Fixed support for barrier
Flashing Light	

FEATURES AND SPECIFICATIONS OF ROAD BARRIER CAME G-6000 (Made in Italy)

Ideal for control of roadway passages, the G 4000 Barrier automation systems offer the added feature of operation with 24V Dc for maximum efficiency as well as greater safety for operator and user.

Features

Electro mechanical gear motor: does not require periodic maintenance.

Self - locking gear motor: positively locks the barrier in the closed position.

Built-in control panel: supplied 24V DC to the motor.

Built-in release system with key: The lock can be changed and unified with those on other Came units.

Configured for easy installation of control and safety accessories.

Configured for installation and connection of an emergency battery.

The electronic control system provides (24 V versions)

- Adjustment of barrier speed to suit the level of traffic at the installation site.
- Adjustment of final approach speed for gentle impact even when barrier is set to move quickly.
- Obstacle detection with stop during closing : Amperometric obstacle detection system.

Materials

Frame in galvanized sheet metal with RAL – 2004 polyester enamel finish and arms in aluminum.

TECHNICAL SPECIFICATIONS: (G-6000)

Type	G – 6000
Weight	72 Kg.
Voltage	230 V AC, 24 V DC
Motor Current	230 V – 1,3 max, 24 V – 15 max
Motor Power	300 W
Duty Cycle	Intensive use
Reduction Ratio	1 / 202 – I
Torque	600 N m
Opening time	4– 8 S

Installation Materials

1. Gard Unit
2. Built-in control panel
3. Accessories

Aluminum Barrier	Key operated switch (or) Push Button
Red phosphorescent strips	Safety Photocells
Antenna	Fixed support for barrier
Flashing Light	

The range

230V Road barrier with built-in control panel

G22500 Automatic road barrier in galvanised and painted steel with 230V A.C. operator
for passage clearances of up to 2.5m. Opening time 2s.

Accessories for 230V A.C. road barriers

G2251 Rectangular-section aluminium bar 40x60x700 mm.
G2257 Joint for G2251 rectangular bar.
G2462 Fixed support for G2251 bars.

24V D.C. Road barrier with built-in control panel

G40000 Automatic road barrier in galvanised and painted steel with 24V D.C. operator
for passage clearances of up to 4m. Opening time 2s - 6s.
G40001 Automatic road barriers in AISI304 stainless steel with 24V D.C. operator
for passage clearances of up to 4m. Adjustable opening time 2s - 6s.
G60000 Automatic road barrier in galvanised and painted steel with 24V D.C. operator
for passage clearances of up to 5m. Adjustable opening time 4s - 8s.
G60001 Automatic road barrier in AISI304 stainless steel with 24V operator
for passage clearances of up to 6m. Adjustable opening time 4s - 8s.

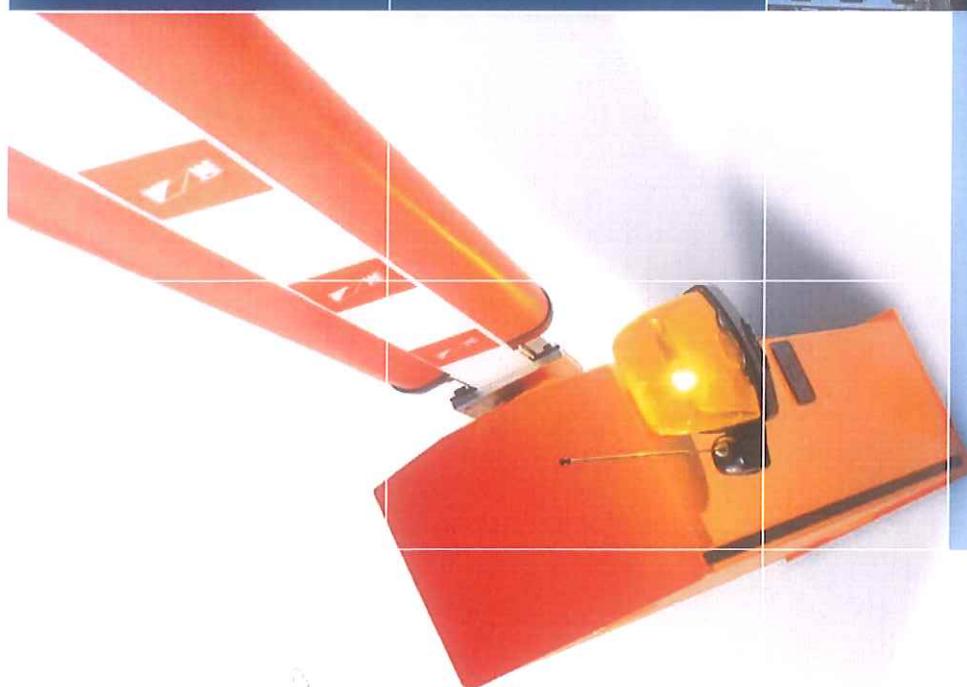
Accessories for 24V D.C. road barriers

Accessories for the G4000 and G6001
G40401 Rectangular-section aluminium bar 40 x 60 x 4200 mm.
G40403 Impact-resistant red protective rubber complete with stoppers for G6001 rectangular bars.
G40461 Red adhesive refracting strips for bars. Package of 24 pieces.
G50402 Aluminium tubular bar ø 50x4x200 mm. (special accessory for areas subject to strong winds).
G60405 Fitting for G6022 tubular bar.
Accessories for the G6000 and G6001
G60001 Rectangular-section aluminium bar 40 x 100 x 6850 mm.
G60003 Impact-resistant red protective rubber complete with stoppers for G6001 rectangular bars.
G60461 Red adhesive refracting strips for bars. Package of 24 pieces.
G60602 Tubular aluminium bar 100x6x550 mm. (special accessory for areas subject to strong winds).
G60605 Fitting for G6022 tubular bar.
Accessories for G4000 - G4001 - G6000 - G6001
G60468 Support for applying Doc series photocells on the cabinet.
G60469 G6060 package of 6 24V signal lamps for G6001 and G6061 rectangular bars.
KIAROS Flashing light series Klaros support.
G60465 Aluminium rack for G6001, G6002, G6061, G6062 bars. 2 m modules.
G6467 Joint for G601 and G601 rectangular bars.
G6462 Fixed support for G601, G602, Gobon, G6061, G6062 bars.
G6463 Mobile support for G601, G602, G6061, G6062 bars.
LB38 Emergency battery card for G4000 - G4001 - G6000 - G6001.



Made in Italy
ISO 9001
For its quality processes
management, Came has been
certified, and for its environmental
management, it is ISO 14001 certified.
Came designs and
manufactures entirely
in Italy.

Automatic
road barriers
for passages
of up to 6.5 m



Gard

Specifically made automa-
tion systems for selecting
street access points.

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Came
Cancelli automatici
S.p.A.
www.came.it - info@came.it



Gard quick barriers are the ideal
solution for selecting access points
in residential and industrial areas,
even when traffic volumes are
high. Gard does not need prior
fitting and is easily installed in any
context.



Gard 230V 24V

The quick
passage
barriers

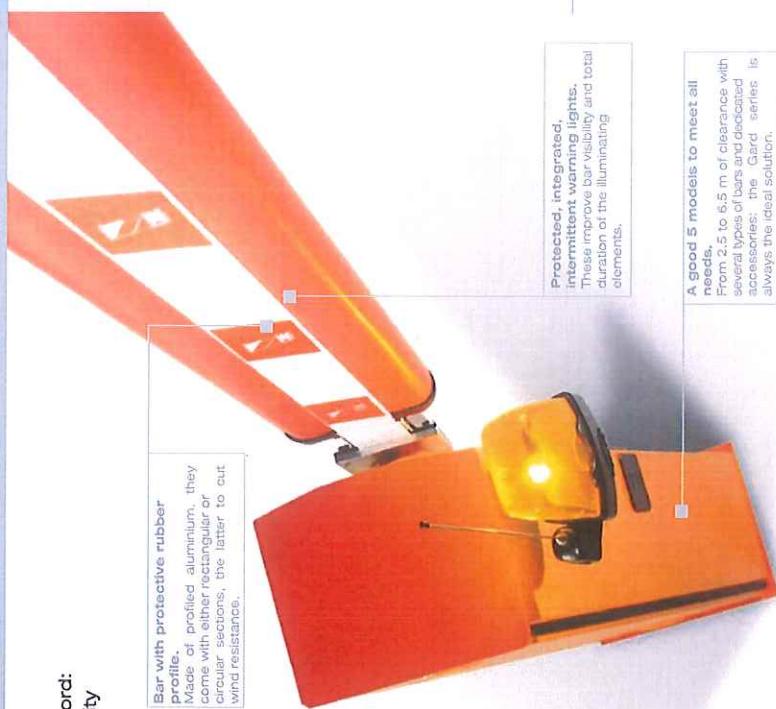
Suited for passage clearances of up to 6.5 m, Gard barriers come in three models depending on the passage.
The G2500 fast opening model is powered by 230V while the G4000 and G6000 models, even in the special AISI 304 inox steel versions, are fitted with a 24V D.C. operator and suited for intensive use.



Catch word:
modularity

Bar with protective rubber profile.
Made of profiled aluminium, they come with either rectangular or circular sections, the latter to cut wind resistance.

Ready made to fit the flashing light.
The entire series of Came Klaro flashing lights can be directly installed on the Gard series cabinet.



General information

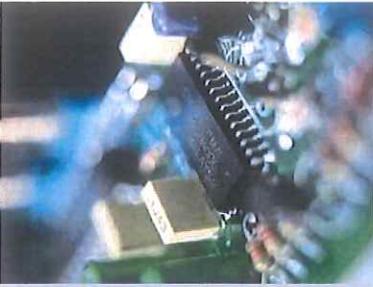
Type	G2500	G4000 - G4001	G6000	G6000 - G6001
Max bar length (m)	2.5	4	3.5	6
Bar without accessories	-	-	3.5	6
Bar with rubber and lights	-	-	3.5	6
Bar with mobile support	-	-	2.5	6
Bar with rubber, lights, rack or mobile support	-	-	2	5
Bar with rack and mobile support	-	-	-	-
Bar with rubber, lights, rack and mobile support	-	-	-	-

Also comes in INOX steel for those special uses.
The G401 and G601 models come with AISI 301 INOX steel cabinet for those especially critical installations such as at motorway toll booths or in areas with high salinity content in the air.

The 230V electronics

The G2500 model's electronics provide optimal control of the bar's movement, providing speed of opening and closing.

- > Just 2 seconds to clear the passage effectively even during high-frequency use.
- > Auto-memorises the radio code from the transmitter to the receiver.
- > Can work in maintained action mode as required by current standards.



The advantages of 24V barriers 24V

Streets, parking areas, collective areas or simply specific functional and security needs of the system can call for the use of a Gard system with 24V technology.

- > **Frequent blackouts**
The electronics of a Gard 24 system automatically recognizes a lack of power and activates emergency mode with special batteries.
- > **Keep speed in check**
For total service, the 24V electronics enables the operating speed to be adjusted depending on whether the situation requires faster or slower openings and closings.
- > **Intensive use**
The low-voltage motor ensures operation of the barrier for intensive traffic conditions, such as streets, parking areas and other areas entailing constant, intensive operation.
- > **Obstacle detection**
A special electronic circuit constantly analyses the proper functioning of the bar, allowing for their total stop, or inversion of movement, when coming into contact with any obstacles.



Even matched in 'slave' mode.

Through an opposite plug on the control panel, the G4000/1 - G6000/1 models can be matched to thus control the actions of two paired automation systems.

Protected, integrated, intermittent warning lights. These improve bar visibility and total duration of the illuminating elements.

A good 5 models to meet all needs. From 2.5 to 6.5 m of clearance with several types of bars and dedicated accessories: the Gard series is always the ideal solution.



Global entry control

The Gard series automatic barrier system can be connected to many of the Came access control systems that allow identification, memorization, and entry and exit only to authorized personnel. The equipment can also be integrated with a global access control system for specific departments in a company or the services offered by a collective structure or apartment blocks.

G4000 / G4001

Automazioni per barriere stradali veloci

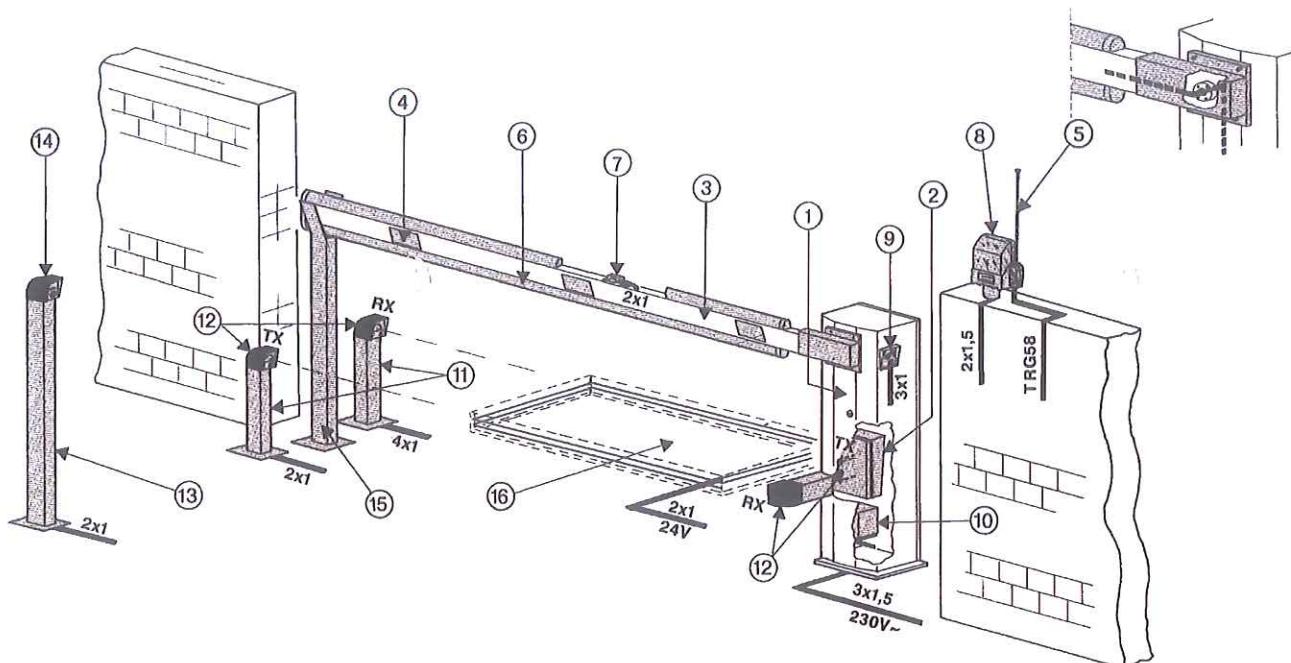
Automation systems for swift road barriers

Automatisations pour barrières routières rapides

Antriebe für Schnell-Schranken

Automatización para barreras viales rápidas

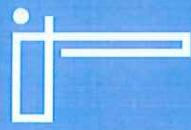
Impianto tipo - Standard installation - Installation type - Standard Montage - Instalación tipo



1. Gruppo GARD	1. GARD unit	1. Groupe GARD	1. GARD- Bausatz	1. Grupo GARD
2. Quadro comando Accessori	2. Control panel Accessories	2. Armoire de commande Accessoires	2. Steuerung Zubehör Accesorios	2. Cuadro de mando Accesorios
3. Asta in alluminio	3. Aluminum barrier	3. Lisse en aluminium	3. Aluminium-Stange	3. Barra de aluminio
4. Strisce rosse fosforescenti	4. Red phosphorescent strips	4. Bandes rouges phosphorescentes	4. Rote Phosphoreszenz-Streifen	4. Bandas rojas fosforescientes
5. Antenna	5. Antenna	5. Antenne	5. Antenne	5. Antena
6. Gomma protettiva	6. Anti-collision rubber	6. Boudin caoutchouc anti-choc	6. Gummi Stoßschutz	6. Protector de goma
7. Lampade di segnalazione	7. Movement indicator lights	7. Lampe de mouvement	7. Bewegungs-Meldeleuchte	7. Lámpara de movimiento
8. Lampeggiatore di movimento	8. Flashing movement warrning light	8. Clignotant de mouvement	8. Blinkleuchte	8. Lámpara intermitente de movimiento
9. Selettori a chiave	9. Key-operated selector switch	9. Sélecteur à clé	9. Schlüsselschalter	9. Selector con llave
10. Batteria di emergenza	10. Emergency battery	10. Batterie d'urgence	10. Notbatterie	10. Batería de urgencia
11. Colonnina per fotocellule	11. Photocell Column	11. Colonne pour photocellule	11. Photozellen-Säule	11. Columna para fotocélula
12. Fotocellule di sicurezza	12. Safety photocells	12. Photocellule de sécurité	12. Sicherheits-Photozelle	12. Fotocélula de seguridad
13. Colonnina per lettore magnetico	13. Column for magnetic card reader	13. Colonne pour lecteur de carte magnétique	13. Magnetkartenleser-Säule	13. Columna para lector magnético
14. Lettore magnetico	14. Magnetic card reader	14. Lecteur de carte magnétique	14. Magnetkartenleser	14. Lector magnético
15. Appoggio fisso	15. Fixed barrier support	15. Appui fixe	15. Feste Stütze	15. Apoyo fijo
16. Sensore magnetico	16. Magnetic sensor	16. Capteur magnétique	16. Magnetischer Sensor	16. Sensor magnético

CAME 

CAME.COM



Automatic barrier
- GARD series

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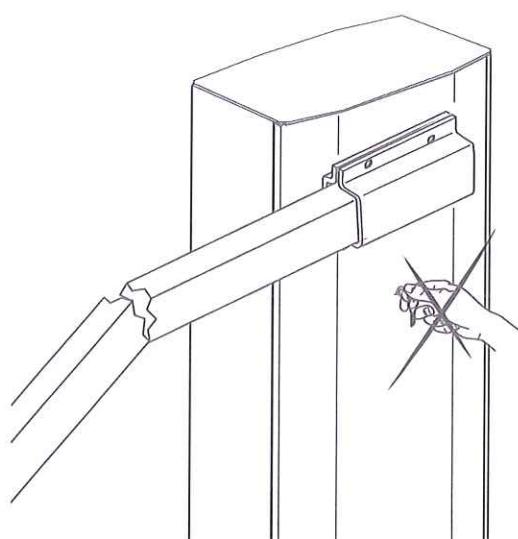
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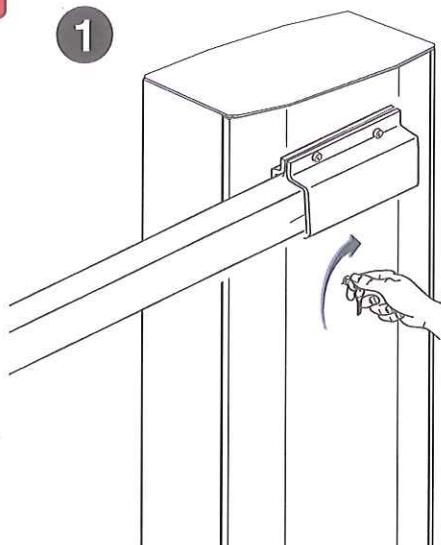
G6000 / G6001

INSTALLATION MANUAL

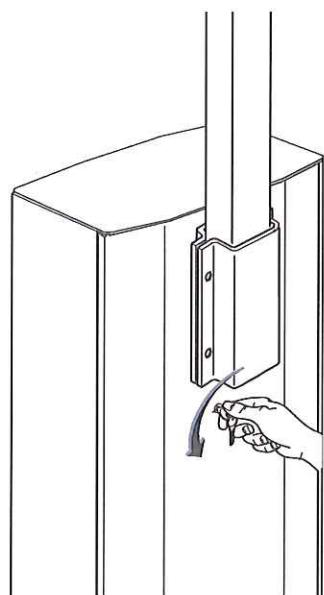
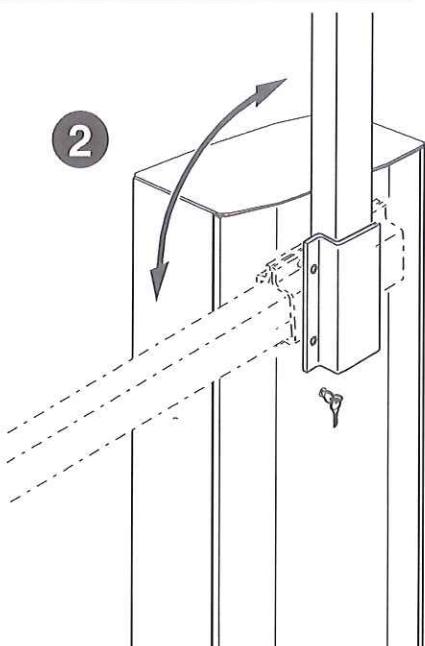
EN English



1



2

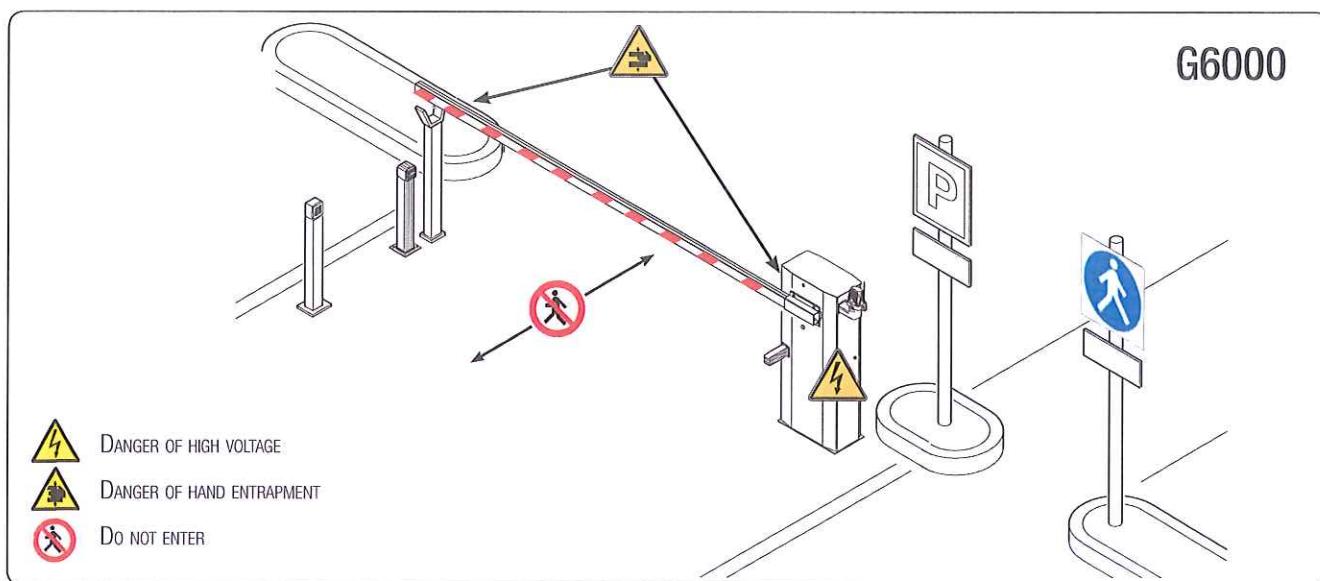


GENERAL PRECAUTIONS FOR INSTALLERS

⚠ CAUTION! Important safety instructions.
Follow all of these instructions. Improper installation can cause serious bodily harm.
Before continuing, also read the general precautions for users.

This product must only be used for its specifically intended purpose. Any other use is dangerous. Came S.P.A. is not liable for any damage caused by improper, wrongful and unreasonable use. • This manual's product is defined by machinery directive 2006/42/CE as "partly-completed machinery". Partly-completed machinery is a set that almost constitutes a machine, but which, alone, cannot ensure a clearly defined application. Partly-completed machinery is only destined to be incorporated or assembled to other machinery or other partly-completed machinery or apparatuses to build machinery that is regulated by Directive 2006/42/CE. The finalized installation must comply with European Directive 2006/42/CE and with currently applicable European standards. • Given these considerations, all procedures stated in this manual must be exclusively performed by expert, qualified staff. • Laying the cables, installation and testing must follow state-of-the-art procedures as dictated by regulations • make sure that the opening of the automatic barrier does not constitute a hazard • do not install the operator onto surfaces that could yield and bend. If necessary, add suitable reinforcements to the anchoring points • check that the temperature range appearing on the operator is suited to the place of installation • do not install on slopes, that is, on any surfaces that are not perfectly level • check that no lawn watering devices spray the operator with water from the bottom up • Suitably section off and demarcate the entire installation site to prevent unauthorized persons from entering the area, especially minors and children. • be careful when handling operators that weigh over 20 kg. If need be, use proper safety hoisting equipment • Please use suitable protections to prevent any mechanical hazards when people are moving around the machinery. • Any residual risks must be notified by proper, clearly visible pictograms, which must be explained to end users • Fit, in plain sight, the machine's ID plate when the installation is complete • All command and control devices must be installed at least 1.85 m from the boom's operating perimeter, or, where they are out of reach from outside the barrier • Unless the key-operation is functioning (for e.g. keypad selector, key-switch selector, transponder selector, and so on), any maintained-action control devices must be installed at least 1.5 m from the ground and out of reach from unauthorized users. • The manufacturer declines any liability for using non-original products; which would result in warranty loss • All maintained-action switches must be fitted so as to be clearly visible from the boom's maneuvering area, and yet well away from any moving parts • Affix a permanent tag, that describes how to use the manual release mechanism, close to the mechanism. • Before handing over to users, check that the system is compliant with the 2006/42/CE uniformed Machinery Directive. Make sure the settings on the operator are all suitable and that any safety and protection devices, and also the manual release, work properly. • If the power-supply cable is damaged, it must be immediately replaced by the manufacturer or by an authorized technical assistance center, or in any case, by qualified staff, to prevent any risk • During all phases of the installation make sure you have cut off the mains power source. • The electrical cables must run through the cable glands and must not touch any heated parts, such as the motor, transformer, and so on. • Make sure you have set up a suitable dual pole cut off device along the power supply that is compliant with the installation rules. It should completely cut off the power supply according to category III surcharge conditions. • When the passage width clearance is greater than 3 m, you must use a fixed rest for the boom to support it • If the barrier is for both pedestrians and vehicles, you must check that it is collision force compliant pursuant to standards EN12453 and EN12445 • If the barrier is only for vehicles, you must set up a suitable pedestrian passage near the vehicle entry, and post suitable signage that prohibit transit of pedestrians and bicycles through the opening • Keep the section of this manual inside the technical folder along with the manuals of all the other devices used for your automation system. Remember to hand over to the end users all the operating manuals of the products that make up the final machinery.

- The figure shows which points constitute a potential hazard to people -



KEY

- This symbol shows which parts to read carefully.
- △ This symbol shows which parts describe safety issues
- ☞ This symbol shows which parts to tell users about.

The measurements, unless otherwise stated, are in millimeters.

DESCRIPTION

Barrier made of painted, galvanized steel or AISI 304 stainless steel, set up to take accessories.

REQUEST EITHER LEFT OR RIGHT-HAND BARRIERS WHEN ORDERING. THE ILLUSTRATIONS IN THIS MANUAL ARE ALL FOR LEFT-HAND BARRIERS!

INTENDED USE

This automatic barrier is designed to operate in private and public parking facilities, in residential areas or in high traffic-volume areas.

□ Do not install or use this device in any way, except as specified in this manual.

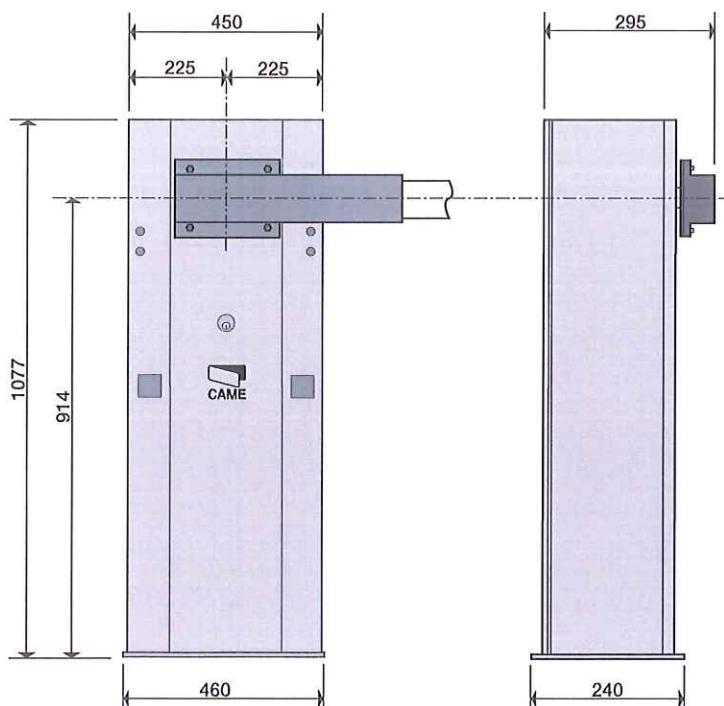
OPERATING LIMITS

Model	G6000 - G6001
Maximum clearance width of the passage (m)	6.5

TECHNICAL DATA

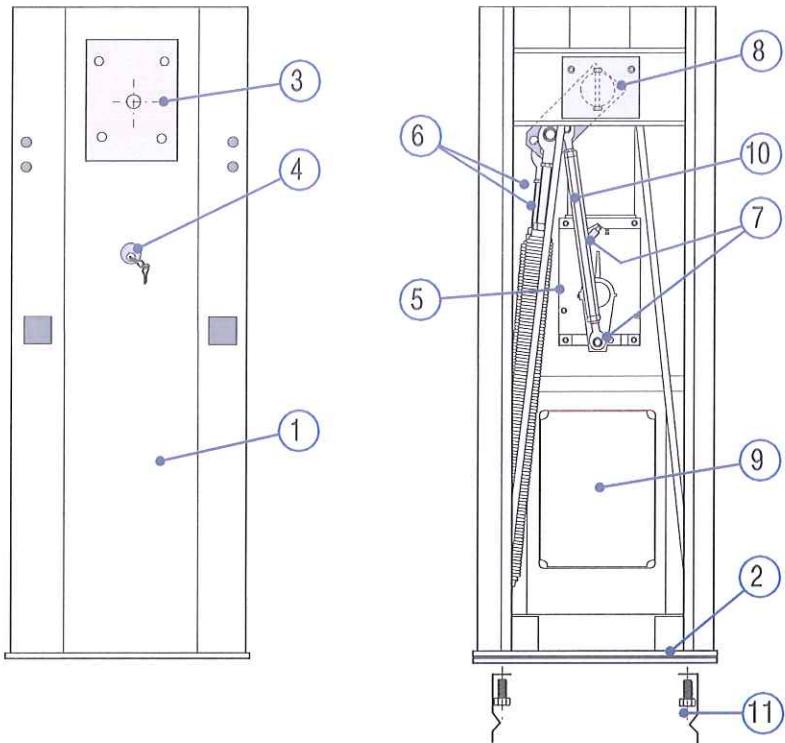
Model	G6000 - G6001
Protection rating (IP)	54
Power supply (V - 50/60 Hz)	230 AC
Input voltage motor (V)	24 DC
Max draw (A)	15
Power (W)	300
Torque (Nm)	600
Opening time (s)	4 ÷ 8
Duty cycle	INTENSIVE SERVICE
Operating temperature (°C)	-20 to +55
Reduction ratio (i)	1/202
Apparatus class	I
Weight (Kg)	72

DIMENSIONS



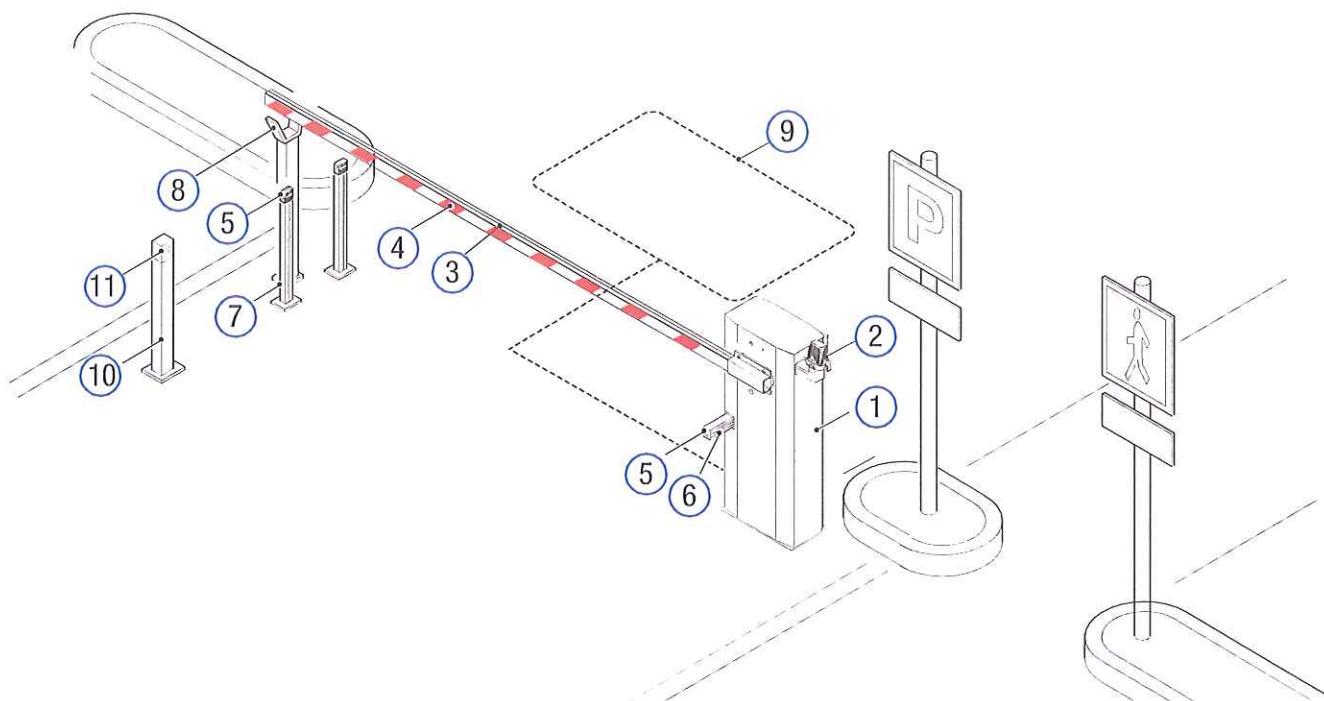
DESCRIPTION OF PARTS

1. Cabinet
2. Anchoring plate
3. Motor-shaft plate
4. Release lock
5. Gear motor
6. Balancing spring
7. Mechanical stops
8. Limit switch
9. Control panel
10. Adjustable transmission rod
11. Anchoring braces



STANDARD INSTALLATION

1. Barrier with boom
2. Flashing light
- 3.
4. Warning lights
Reflective strips
5. Photocells
6. Photocell casing
7. Small photocell post
8. Fixed rest
9. Coil
10. Control device post
11. Control device (keypad selector, transponder sensor)



GENERAL INSTRUCTIONS FOR INSTALLING

⚠ Only skilled, qualified staff must install this product.

PRELIMINARY CHECKS

⚠ Before beginning, do the following:

- make sure the plate is anchored to a solid spot;
- check that there are no obstructions or impediments near the cabinet; • set up suitable tubes and conduits for the electric cables to pass through, making sure they are protected from any mechanical damage.

CABLE TYPES AND MINIMUM THICKNESSES

Connection	cable length	
	< 20 m	20 < 30 m
Input voltage for 230 V AC control board (1P+N+PE)	3G x 1.5 mm ²	3G x 2.5 mm ²
Command and control devices	2 x 0.5 mm ²	
Signaling devices	2 x 0.5 mm ²	
TX Photocells	2 x 0.5 mm ²	
RX photocells	4 x 0.5 mm ²	

⚠ When operating at 230 V and outdoors, use H05RN-F-type cables that are 60245 IEC 57 (IEC) compliant; whereas indoors, use H05VV-F-type cables that are 60227 IEC 53 (IEC) compliant. For power supplies up to 48 V, you can use FR0R 20-22 II-type cables that comply with EN 50267-2-1 (CEI).

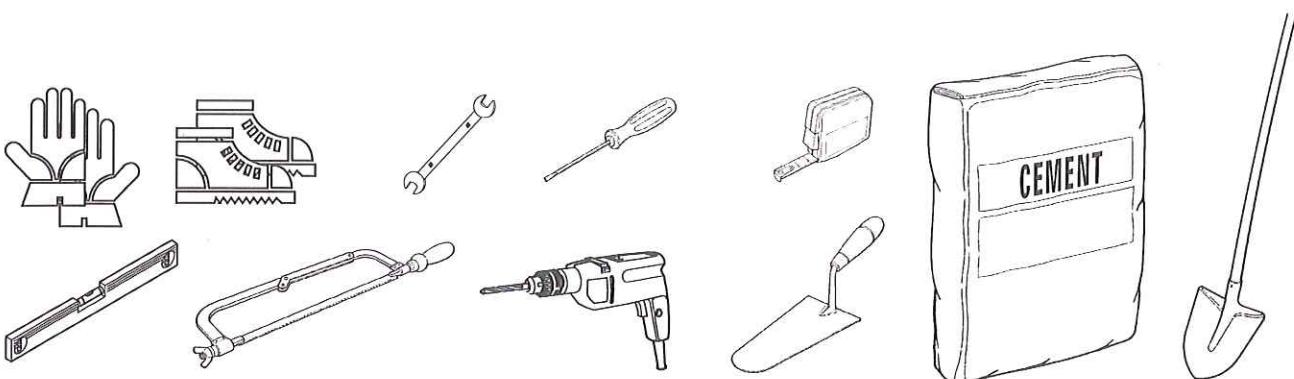
💡 To connect the antenna, use the RG58 (we suggest up to 5 m).

💡 If cable lengths differ from those specified in the table, establish the cable sections depending on the actual power draw of the connected devices and according to the provisions of regulation CEI EN 60204-1.

💡 For multiple, sequential loads along the same line, the dimensions on the table need to be recalculated according to the actual power draw and distances. For connecting products that are not contemplated in this manual, see the literature accompanying said products

TOOLS AND MATERIALS

Make sure you have all the tools and materials you will need for installing in total safety and in compliance with applicable regulations. The figure shows some of the equipment installers will need.



INSTALLING

⚠ The following illustrations are mere examples. Consider that the space available where to fit the barrier and accessories will vary depending on the area where it is installed. It is up to the installer to find the most suitable solution.

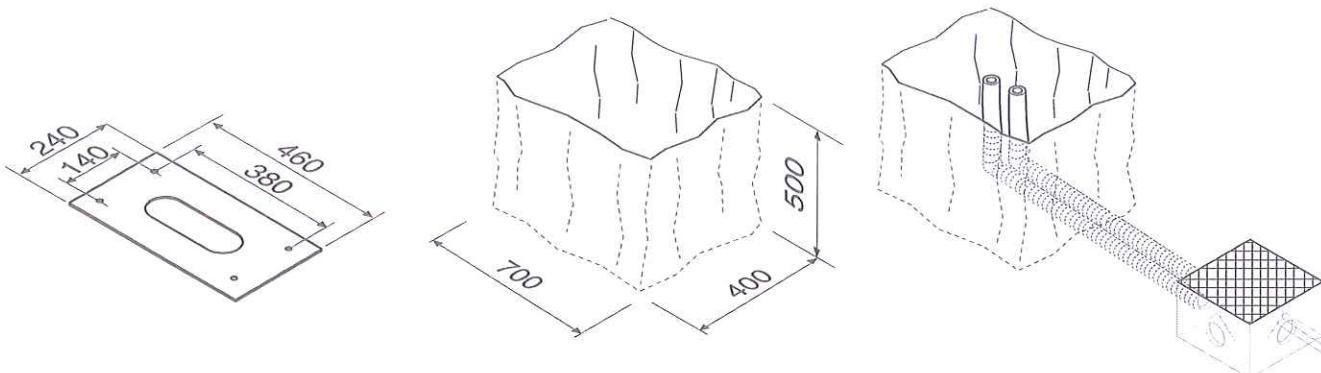
SETTING UP THE ANCHORING PLATE

⚠ If the flooring does not allow for a sturdy fastening of the entry unit, you will have to set up a cement slab.

Dig a hole for the foundation frame.

Set up the corrugated tubes needed for the wiring coming out of the junction pit.

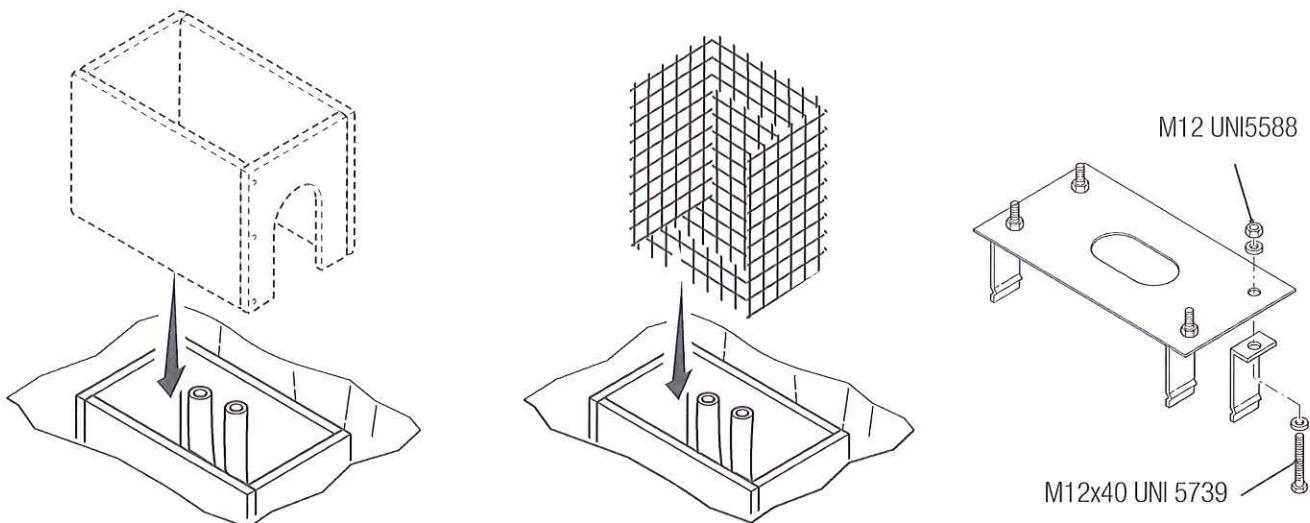
📘 The number of tubes depends on the type of system and the accessories you are going to fit. Set up a 230 V power-supply cable.



Set up a foundation frame that is larger than the anchoring plate and sink it into the dug hole.

Fit an iron cage into the foundation frame to reinforce the concrete.

Assemble the four anchoring braces to the anchoring plate.

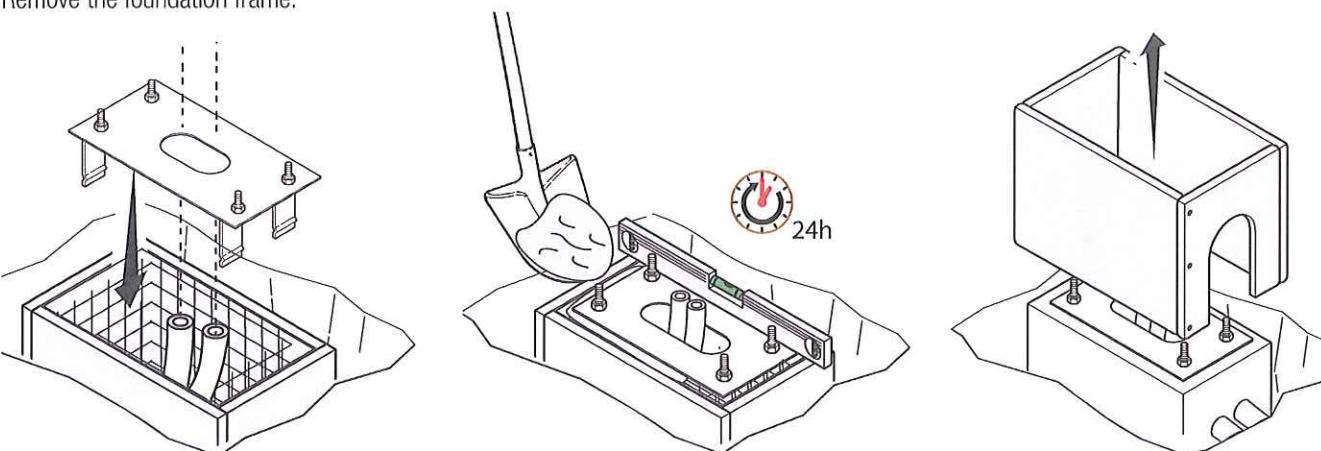


Place the plate over the iron cage.

Fill the foundation frame with concrete. The base must be perfectly level with the bolts which are entirely above surface.

Wait at least 24 hrs for the concrete to solidify.

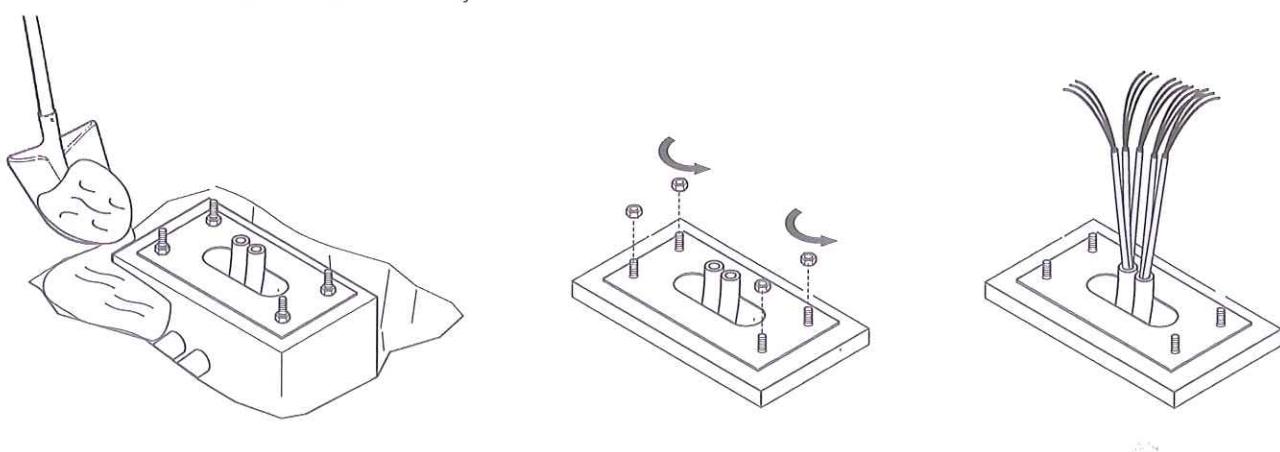
Remove the foundation frame.



Fill the hole with earth around the concrete block.

Remove the nut and washer from the bolts

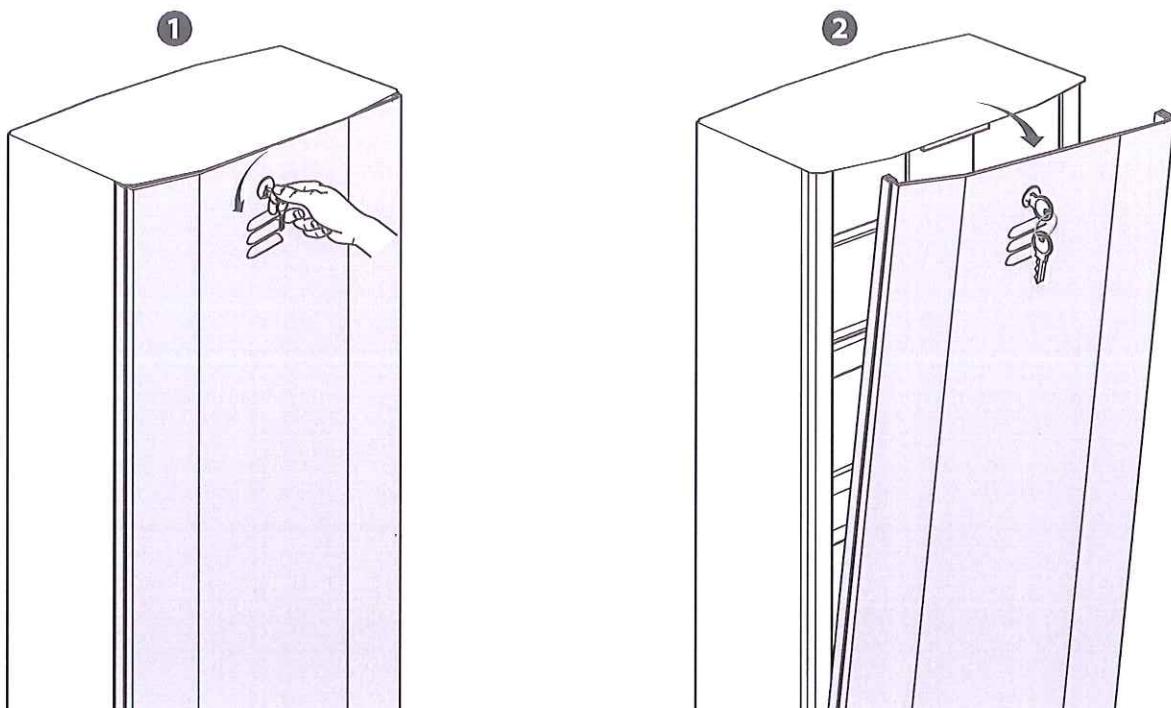
Fit the electric cables into the tubes so that they come out about 600 mm.



SETTING UP THE BARRIER

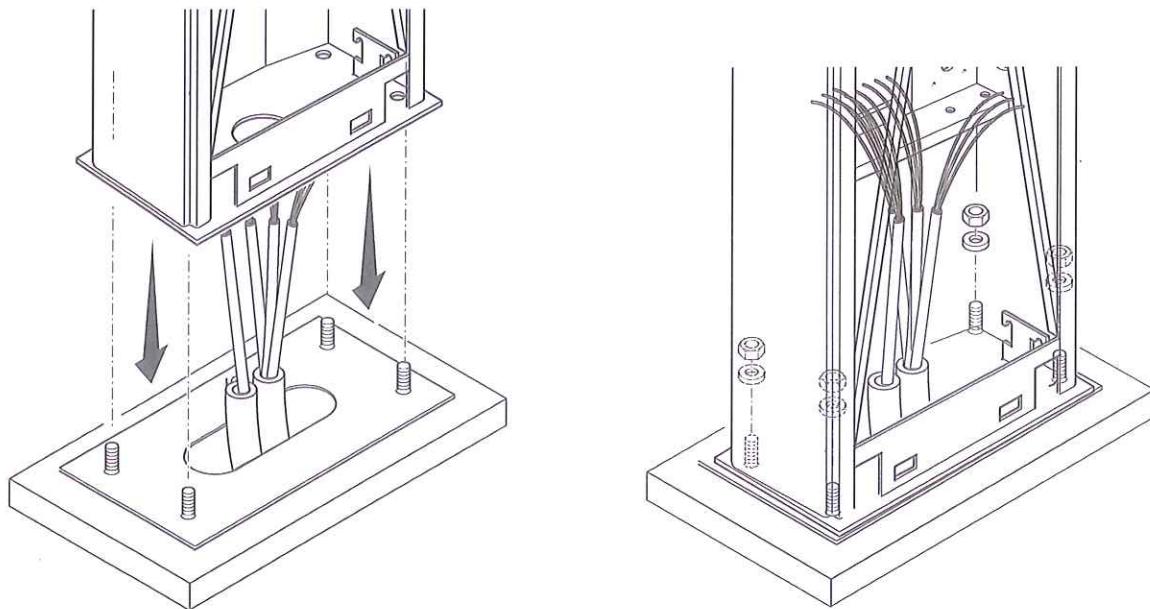
⚠ Warning! Use hoisting equipment to transport and position the barrier. The mounting must be done by at least two people. During the initial mounting and fastening, the barrier may be unstable and could tip over. Then be careful to no rest against it until it is completely and securely fastened.

Fit the customized key into lock on the inspection hatch and turn it counterclockwise.

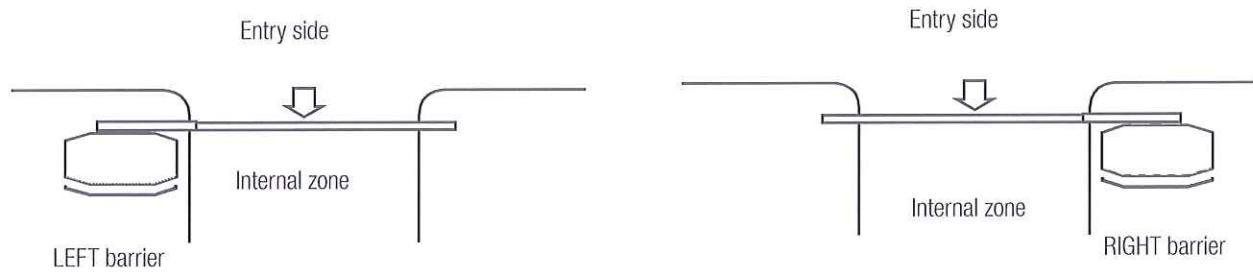


FASTENING THE BARRIER

Place the cabinet onto the anchoring plate and fasten it using nuts and washers.



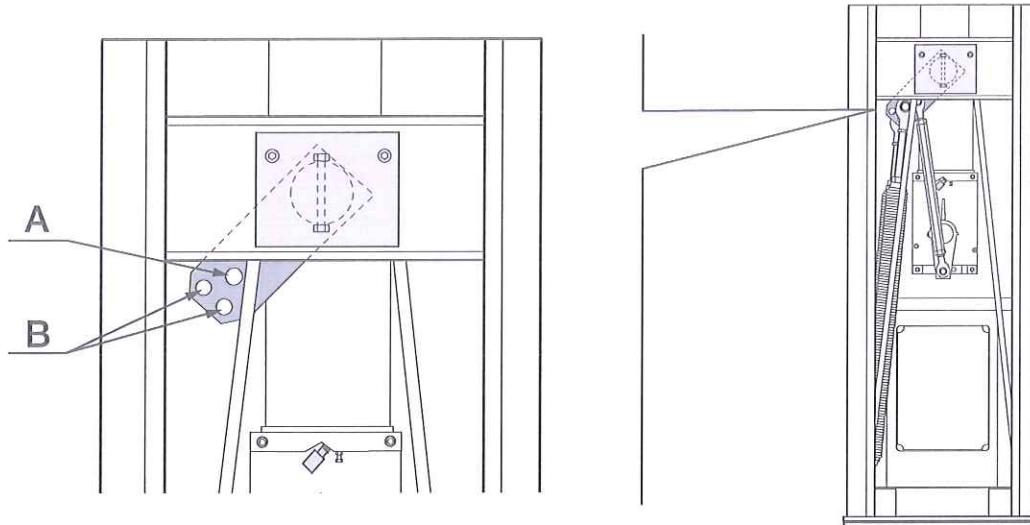
To change the rotation at a later date, request the documentation from your local retailer or contact Came in your Country (see the last page or visit www.came.com)



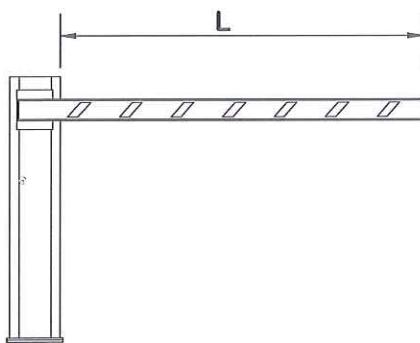
BALANCING THE BOOM

The barrier is supplied with two Ø 50 mm springs (001G04060). The springs attach to lever arm (in the B-holes). Depending on how the barrier is finally configured, you may need to exclude one of the two springs or reattach it (see the table below).

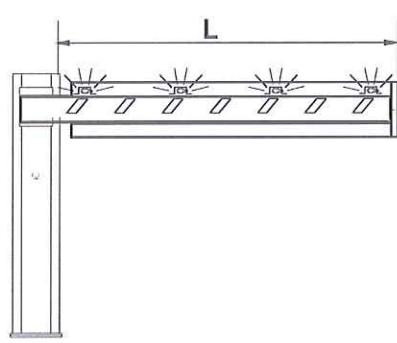
⚠ When configuring the barrier, make sure the gearmotor is locked!



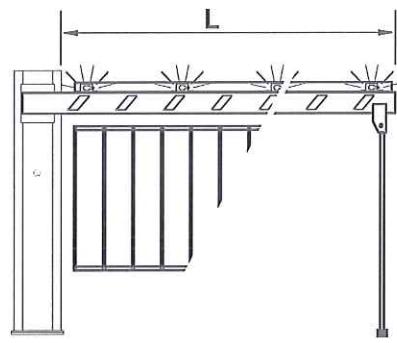
Boom



Boom with warning lights



Boom with warning lights and skirt or swing leg



L = LATERAL CLEARANCE (m)	3 ÷ 4	4 ÷ 5	5 ÷ 6	6 ÷ 6.5
Boom	A	A	B	AB
Boom with the 001G0460 warning lights	A	B	AB	-
Boom with the 001G0465 warning lights and skirt or the 001G02808 swing leg	B	AB	BB	-

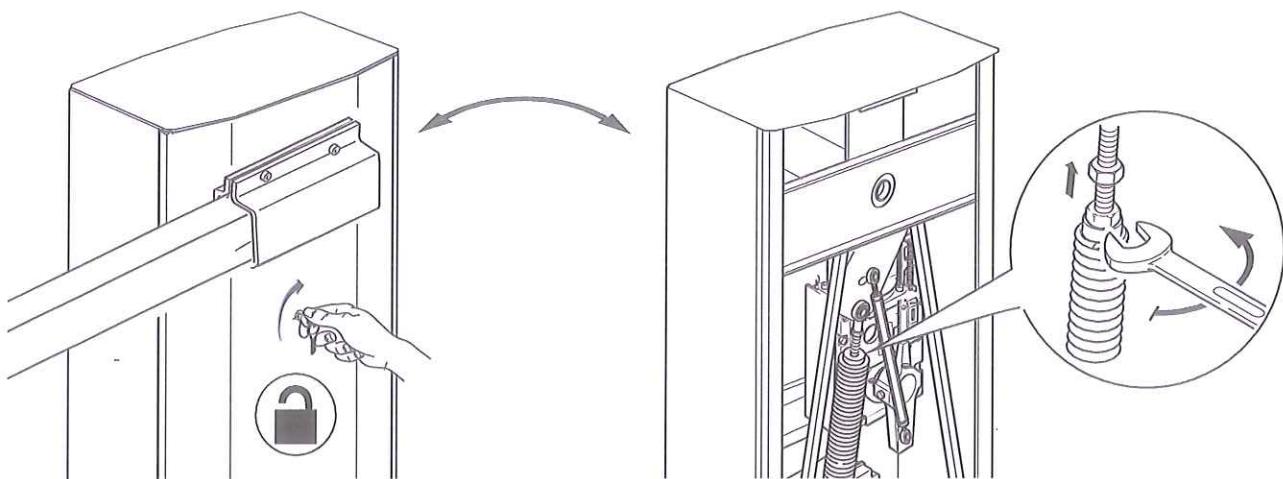
⚠ WARNINGS!

The 001G02802 cannot be used on barriers fitted with the 001G0465 skirt or 001G02808 swing rest

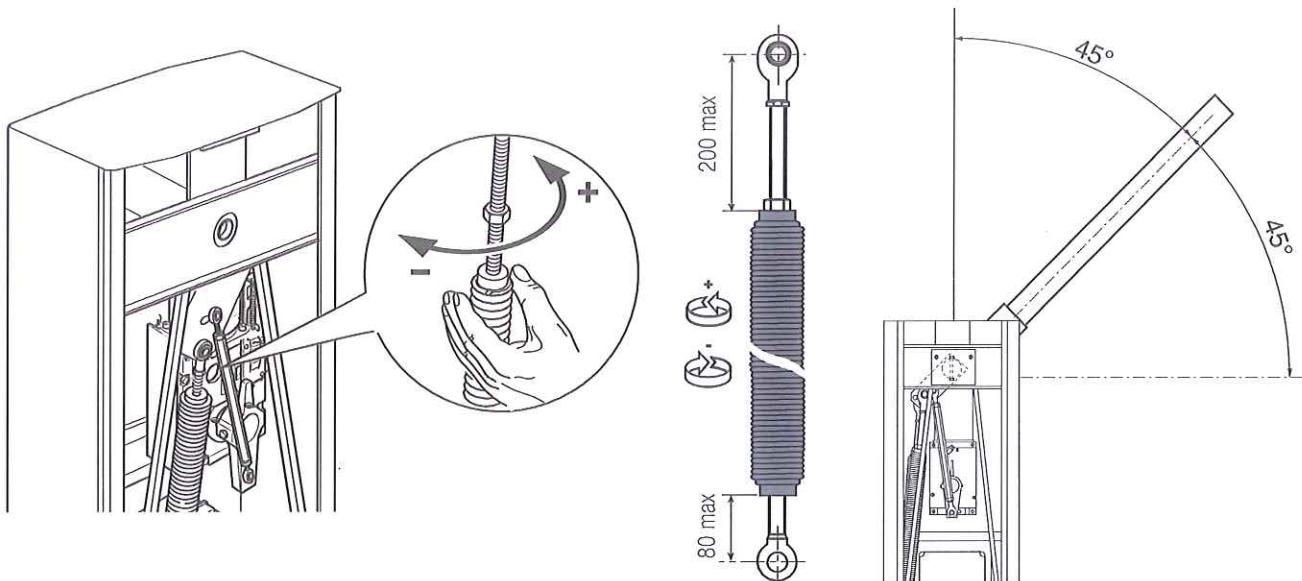
The 001G02807 MUST be used with passage widths exceeding 3 m.

The 001G0465 and 001G02808 cannot be used together.

To precision balance the barrier, first release the gear motor and loosen the rod nut.

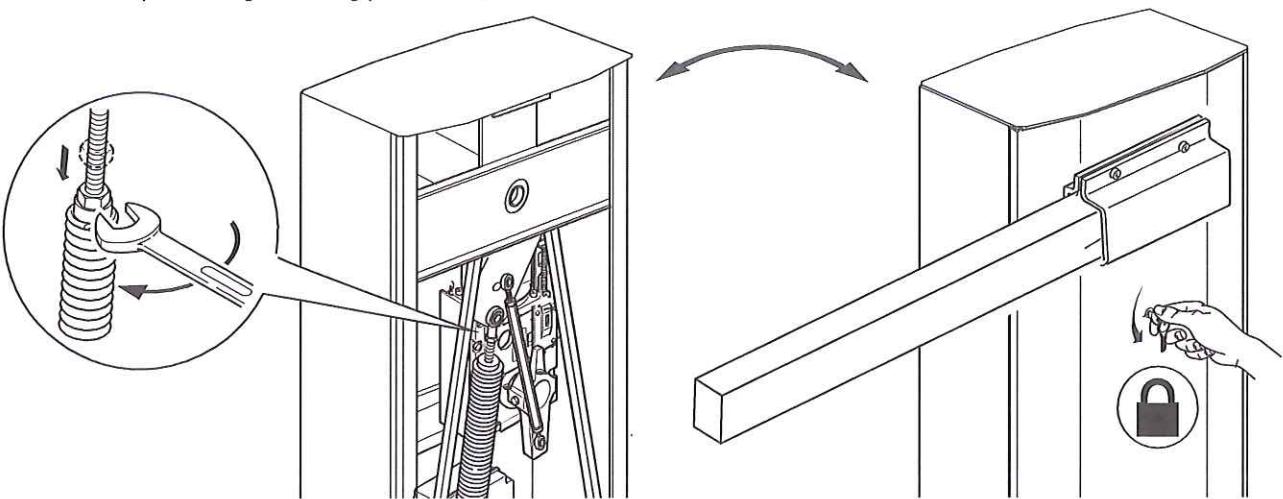


Manually turn the spring to increase or reduce the traction. The boom should stabilize at 45°.



Fit the nut to fasten the rod to the spring and tighten it.
Lock the gearmotor once again.

- Check the proper working state of the spring.
With the boom raised vertically the spring is not taut.
With the boom lowered horizontally the spring is taut.
- Caution! After performing balancing procedures, LUBRICATE THE SPRINGS WITH SPRAY GREASE!



CONTROL PANEL

⚠ Caution! Before working on the control panel, cut off the mains power supply and remove any batteries.

Power supply to the control panel and control devices: 24 V AC/DC.

Use DIP switches to set functions and the trimmer for adjustments.

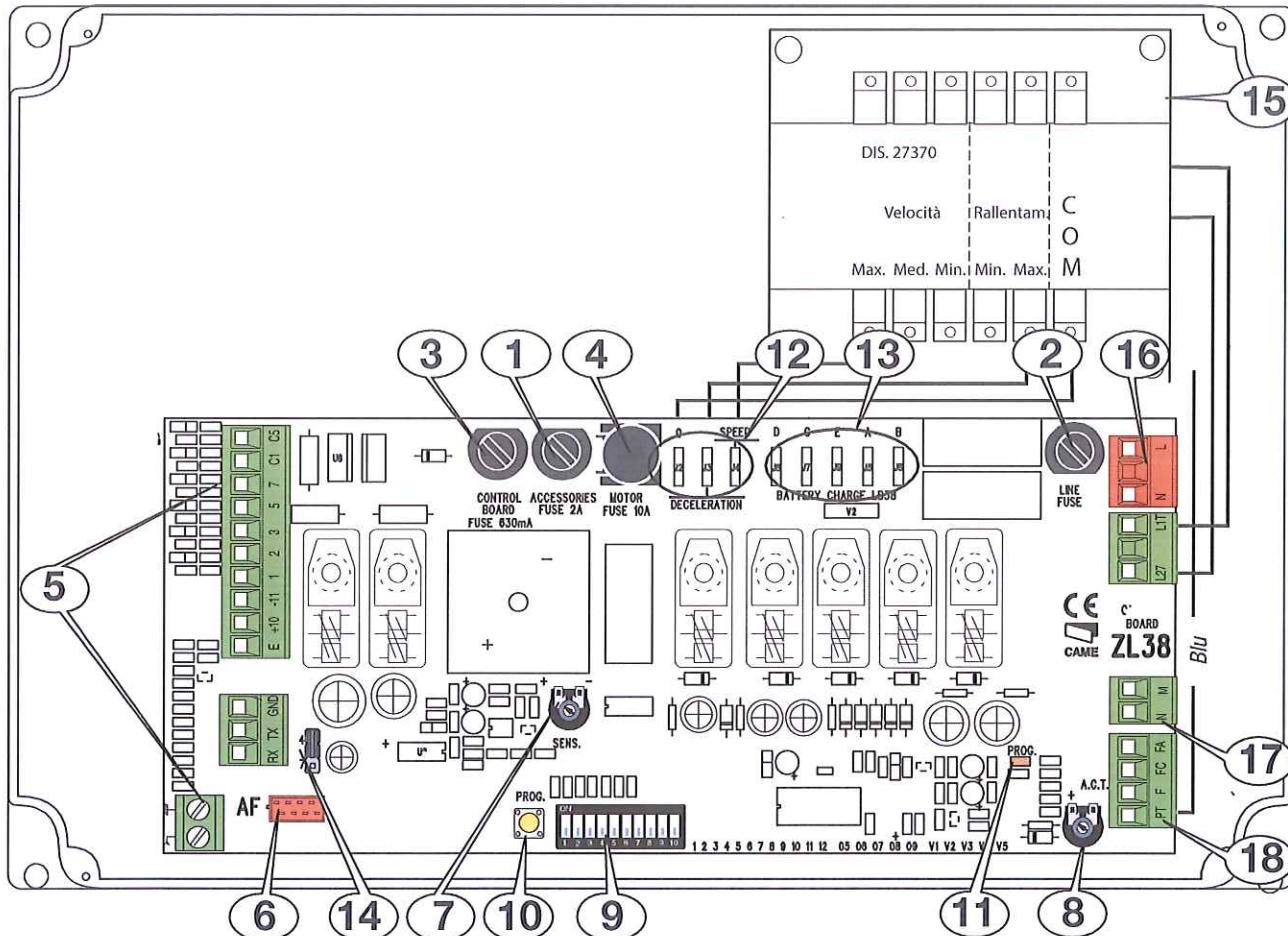
All wiring connections are quick-fuse protected.

FUSE TABLE

LINE - Line	ZL38
C.BOARD - Card	3.15 A-F
MOTOR - Gearmotor	630 mA-F
ACCESSORIES - Accessories	10 A-F
	2 A-F

DESCRIPTION OF PARTS

- | | |
|---|--|
| 1. Accessories fuse | 10. Programming button |
| 2. Line fuse | 11. Programming warning LED |
| 3. Control-board fuse | 12. Speed and slow-down adjusting connectors |
| 4. Motor fuse | 13. Battery charger (LB38) connectors |
| 5. Terminals for control and safety devices | 14. Command type selection jumper |
| 6. AF card slot | 15. Transformer |
| 7. SENS trimmer | 16. Power supply terminals |
| 8. ACT Trimmer | 17. Terminal for gearmotors |
| 9. DIP-SWITCH | 18. Limit-switch terminals |

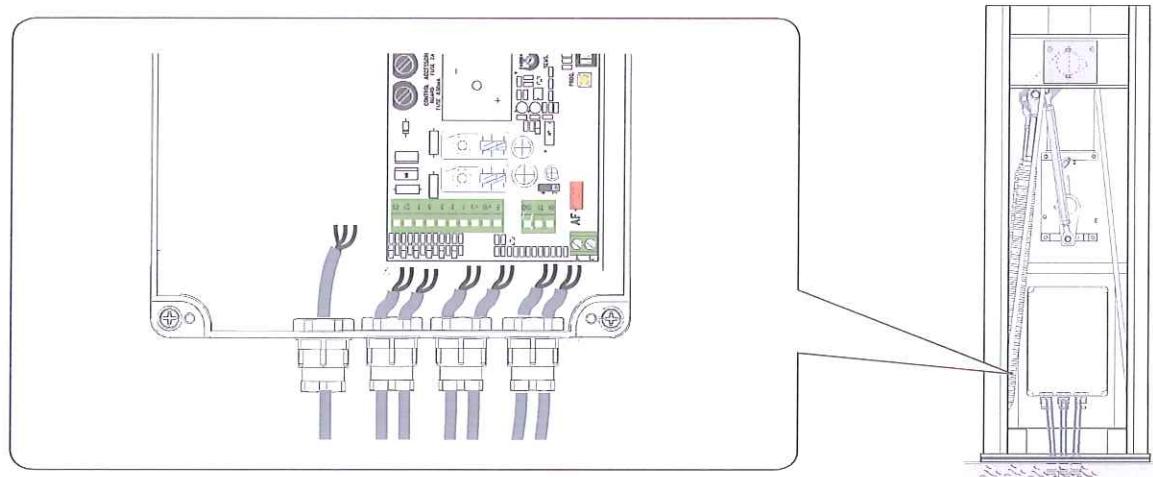


ELECTRICAL CONNECTIONS

Connect all wires and cables in compliance with the law while using suitable cable glands, as shown in the drawing.

⚠ Use a cable gland only for the 230 V AC power supply cable.

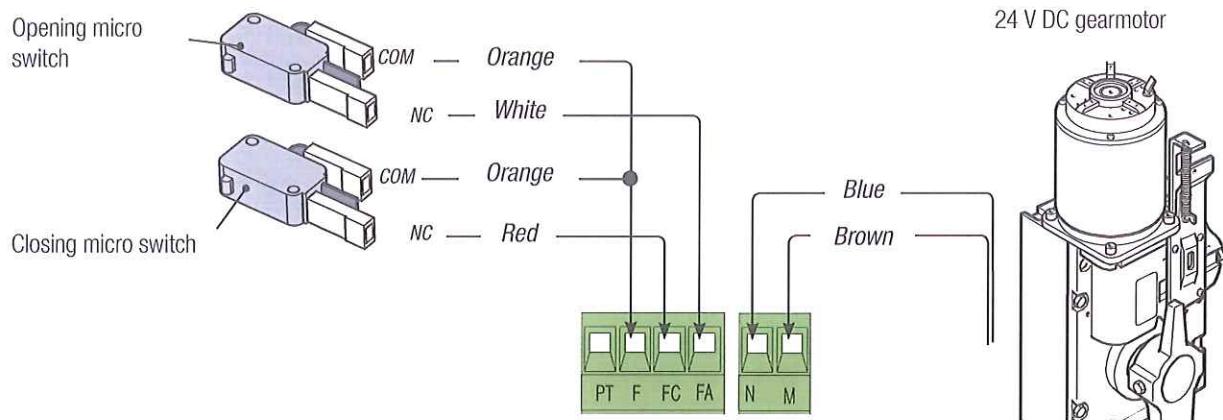
⚠ The electrical cables must not touch any heated parts such as the motor, transformer, and so on.



FACTORY WIRING

The gearmotor is already connected.

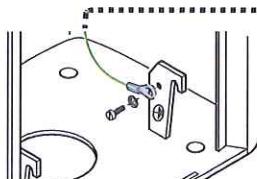
To install the barrier on the right side, ask your local retailer for the documentation needed or contact Came in your country, see www.came.com



POWER SUPPLY

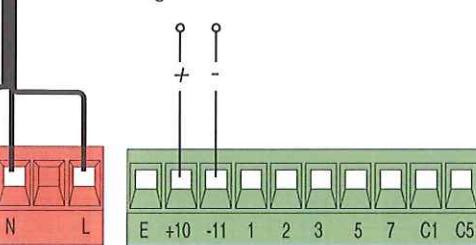
230 V AC - 50/60 Hz

Eyelet terminal with screw and washer for grounding connection.



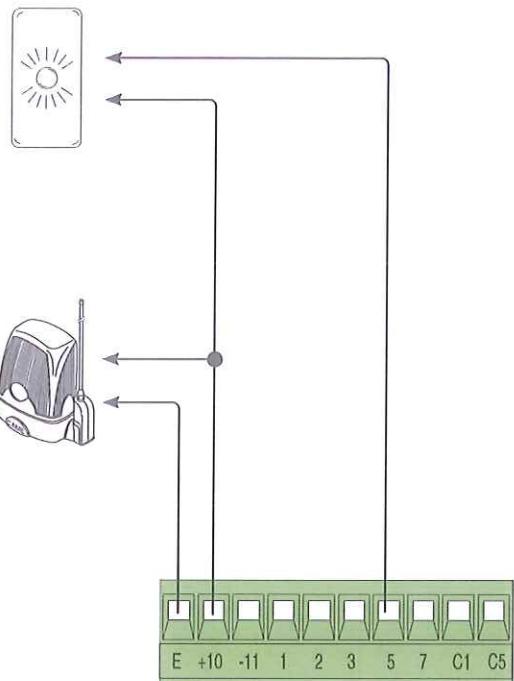
Output to power 24 V AC accessories (normally) - max. 40 W.

⚠ If the power is out, you can power up the 24 V DC accessories by using buffer batteries.



SIGNALING DEVICES

Output to notify the state of the barrier (Contact rated for: 24 V AC - 3 W max.). It warns of the booms raised position, and switches off when the boom is lowered.



Output for flashing light (Contact rated for: 24 V - 32 W max).

It flashes when the boom is moving.

Alternatively, in functions programming you can activate the flashing for when the boom is moving and when it is closed. See Dip-switch 3.

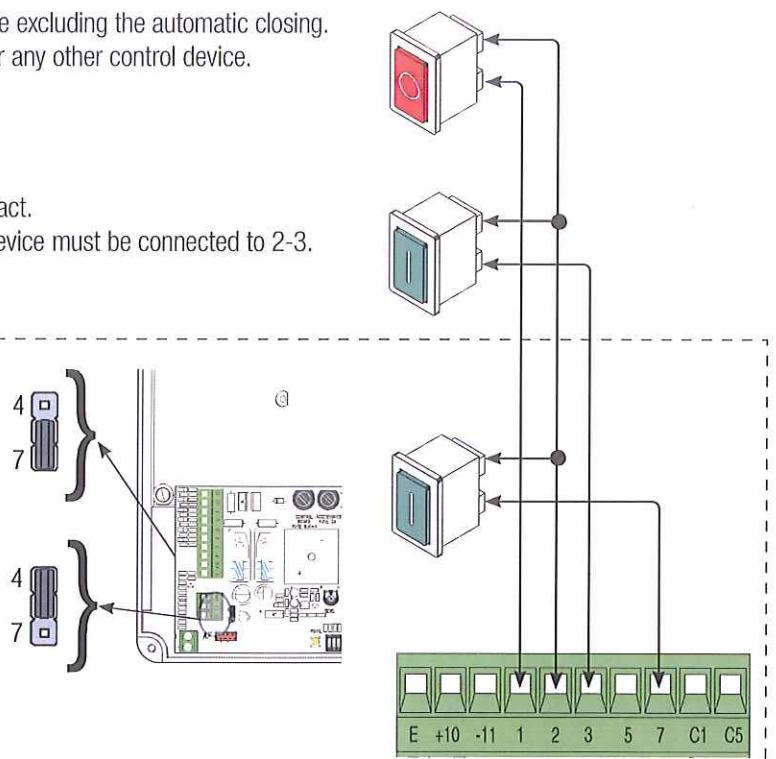
CONTROL DEVICES

STOP button (NC contact). For stopping the boom while excluding the automatic closing. To resume movement either press the control button or any other control device.

If unused, set DIP switch 9 to ON.

OPEN ONLY function from control device with NO contact.

Warning: in MAINTAINED ACTION mode, the control device must be connected to 2-3.



ONLY OPEN or OPEN-CLOSED-INVERT (step-step) function from control device (NO contact, see DIP switch 2).

Set the jumper as shown in the figure.

ONLY CLOSE function from control device (NO contact).

Warning: in MAINTAINED ACTION mode, the control device must be connected to 2-4.

Set the jumper as shown in the figure.

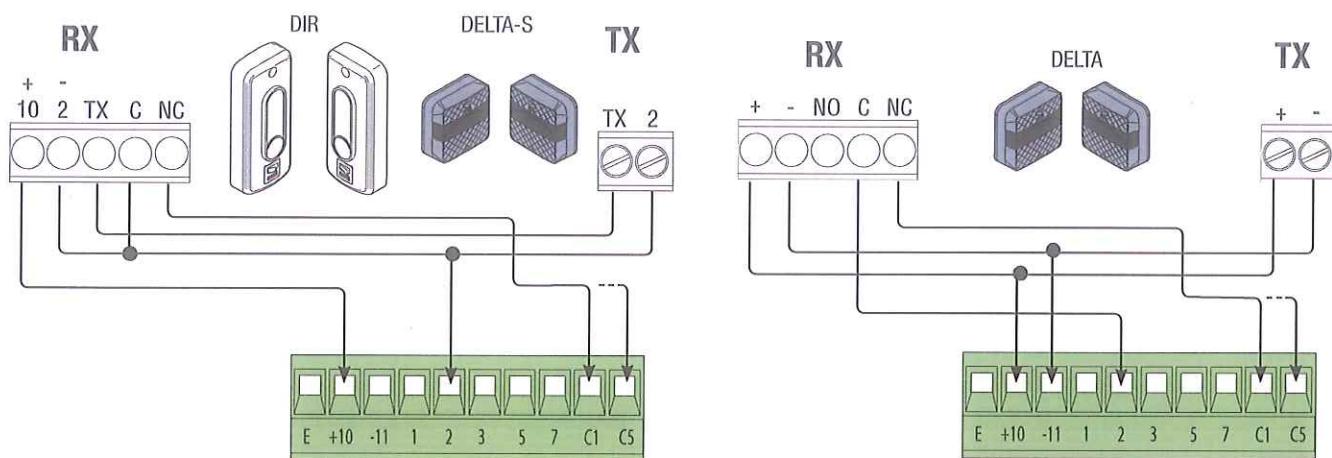
SAFETY DEVICES

Photocells

Configure NC contact/s C1 and/or C5, input for safety accessories such as photocells.

C1 reopening while closing. When the boom is closing, opening the contact causes its movement to invert until fully opened;
□ If unused, shortcircuit contact 2-C1.

C5 immediate closing. Closing the boom after a vehicle has passed through the operating area of the safety devices.
□ If unused, set DIP switch 8 to ON.



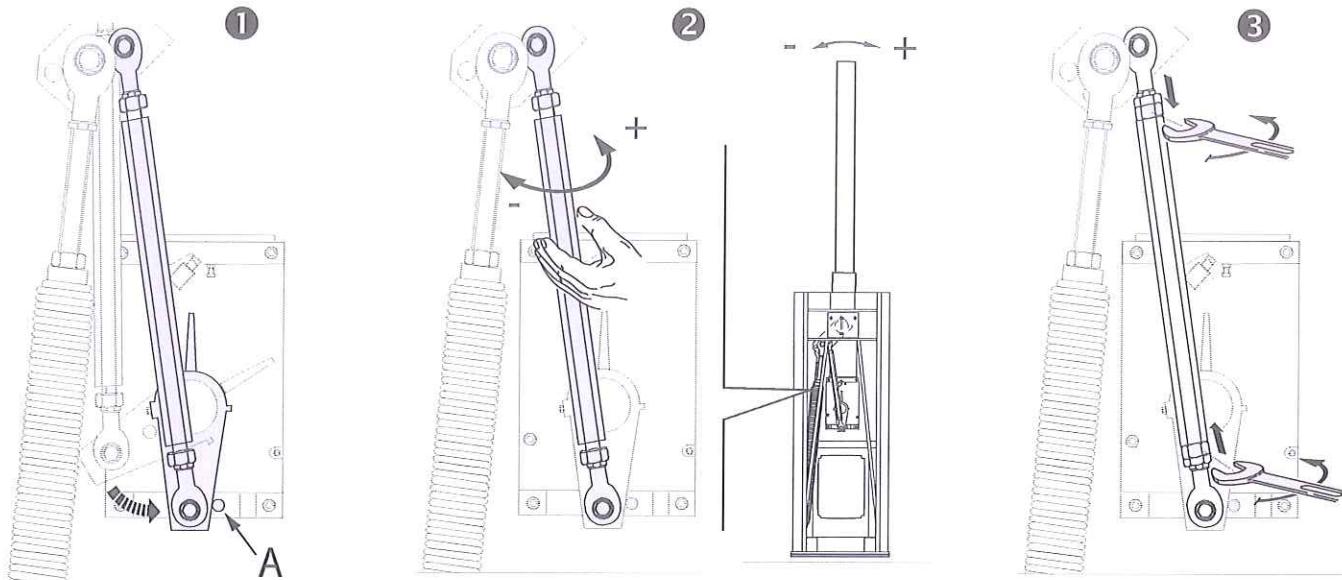
ESTABLISHING THE LIMIT-SWITCH POINTS

Close the inspection hatch and power up the system. Move the boom so that it is parallel to the road surface when closed and at about 89° when open.

⚠ The barrier's opening and closing maneuvers must be performed with the inspection hatch closed.

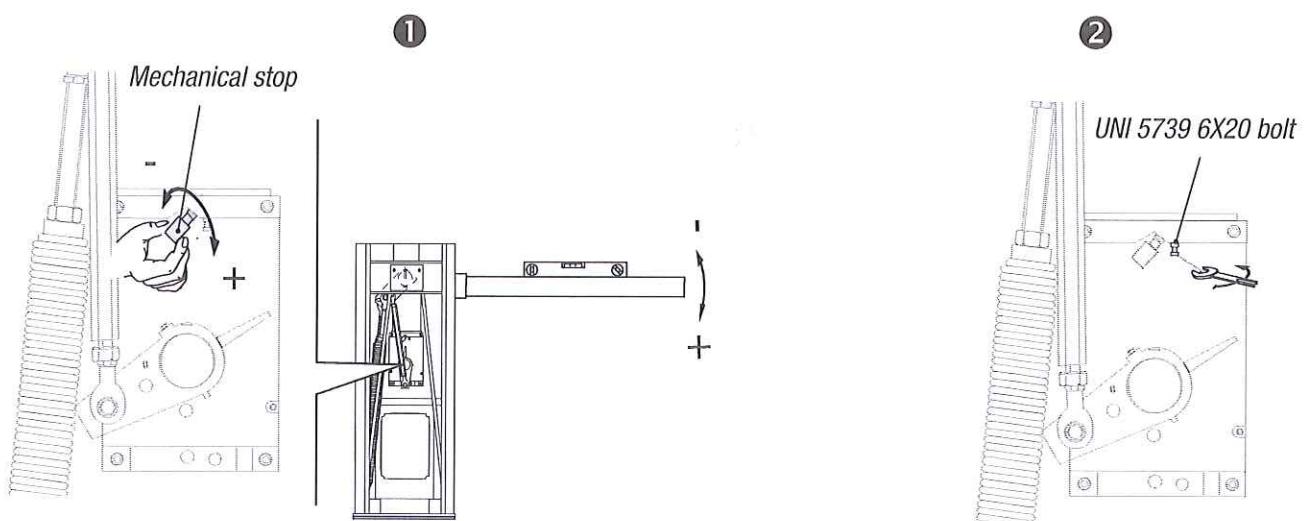
For opening:

- release the gearmotor;
- raise the boom until the drive arm rests against stop A in the gearmotor casing ①;
- turn the adjustable transmission-rod either clockwise or counter-clockwise to establish a vertical position ②;
- tighten the nuts to lock the transmission rod ③.



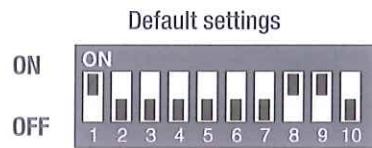
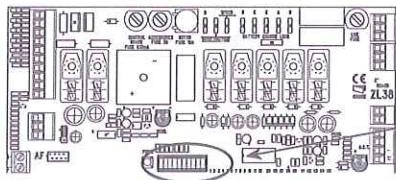
For closing:

- with the boom raised, turn the mechanical closing-stop clockwise or counter clockwise to establish the horizontal position ①;
- tighten the hexagonal bolt to lock the stop into place ②;
- lock the gear motor back into place.



PROGRAMMING

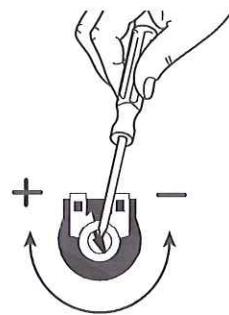
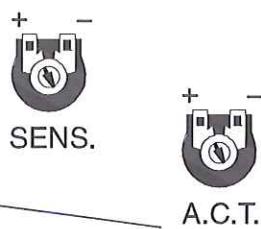
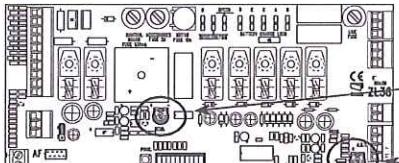
FUNCTIONS



DIP-SWITCH Description of functions

1 ON	AUTOMATIC CLOSING; set 1 to OFF to deactivate it
2 ON	ONLY OPEN from button 2-7 and/or from transmitter (with AF card fitted)
2 OFF	OPEN-CLOSE-INVERT from the button on 2-7 and/or from a transmitter (with AF card fitted)
3 ON	24 V output on 10-E during the boom's movement phases and when it is in closed position
3 OFF	24 V output on 10-E during the boom's movement phases
4 ON	MAINTAINED ACTION; set 4 to OFF to deactivate it
5 ON	PRE-FLASHING when opening and closing; the preflashing time is 5 seconds - set 5 to OFF to deactivate it.
6 ON	OBSTRUCTION DETECTION when motor is idle; set 6 to OFF to deactivate it
7 ON	piloted SLAVE motor; set 7 to OFF to deactivate it
8 OFF	IMMEDIATE CLOSING of the boom; set 8 to ON to deactivate it
9 OFF	TOTAL STOP; set 9 to ON to deactivate it
10 ON	BRAKING ACTION of the boom when closing; set 10 to OFF - to deactivate it

TRIMMER



Trimmer Description of functions

SENS	Sensibility
	It adjusts the obstruction detection sensitivity during gate movement. Minimum sensitivity (-) or maximum sensitivity (+).
A.C.T.	Automatic Closing Time
	It adjusts the barrier's waiting time when it is open. Once this time elapses, the shutter automatically closes. The waiting time may be adjusted to between 1 and 120 seconds

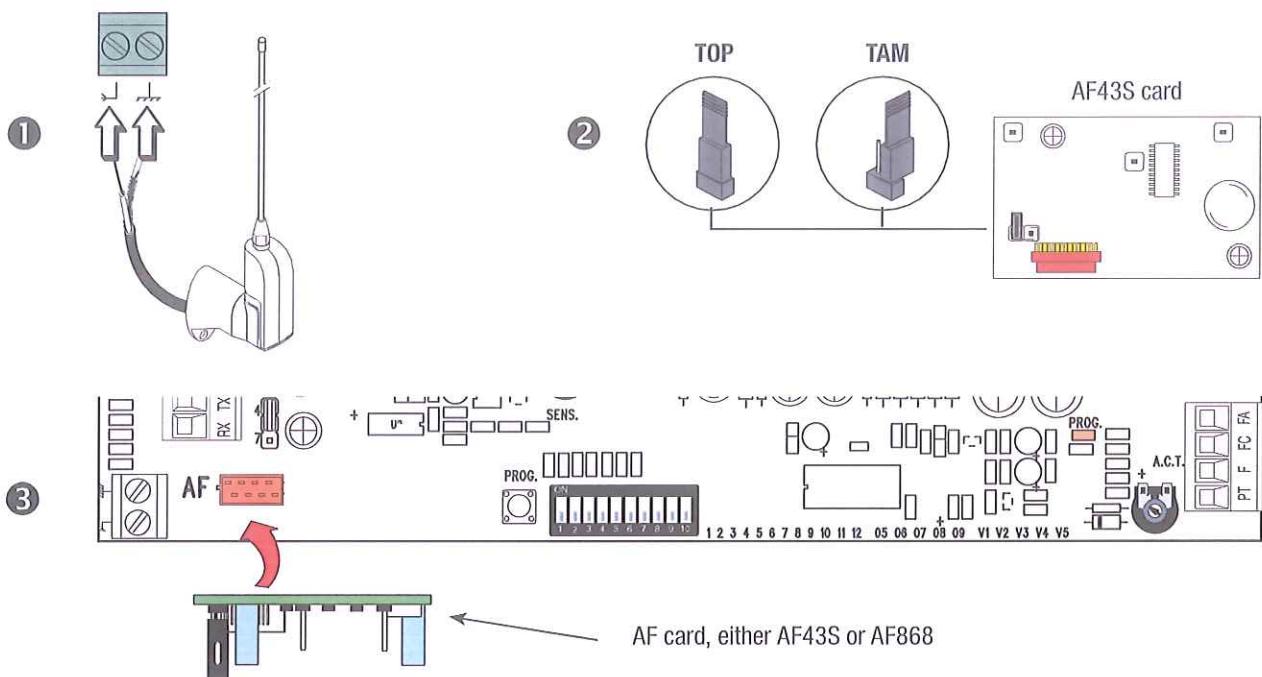
ACTIVATING THE RADIO CONTROL

Connect the RG58 cable antenna cable to the corresponding terminals ①.

For TOP and TAM series transmitting on 433.92 MHz, set the jumper-switch of the AF43S card as shown in the figure ②.

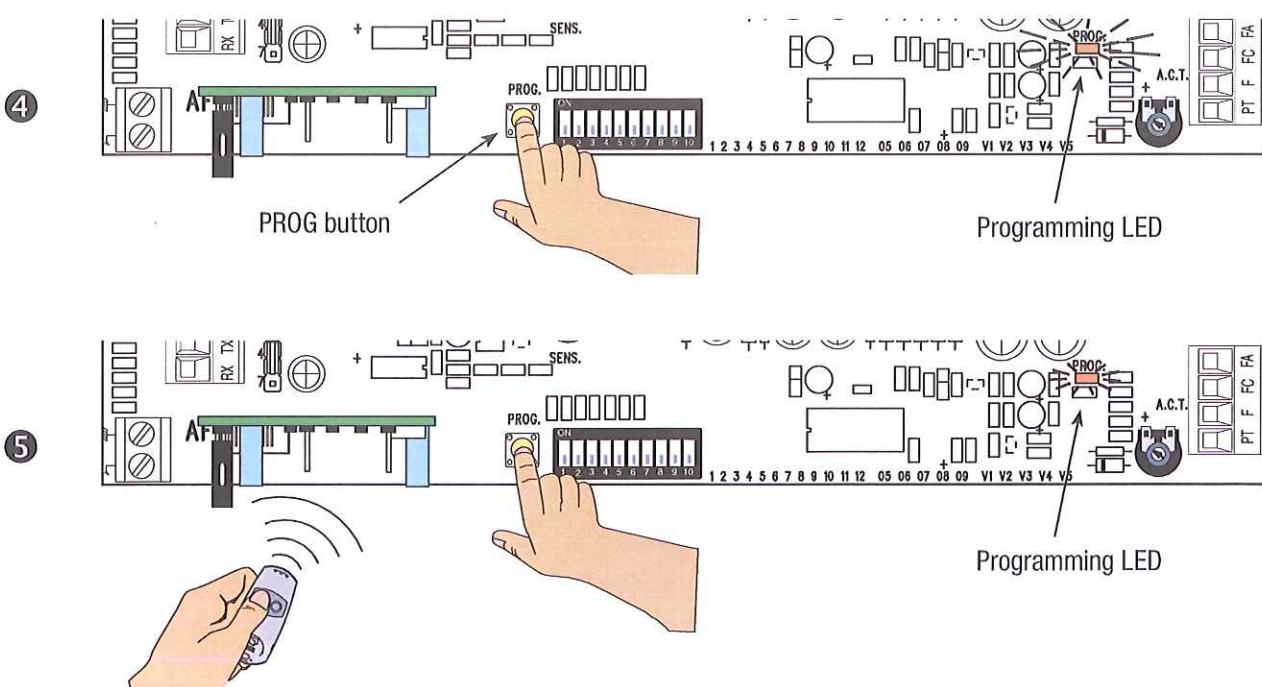
Plug the AF card, that is, the AF43S or the AF868 into the connector on the control board ③.

⚠ Before fitting the AF card, you MUST CUT OFF THE MAIN POWER SUPPLY and, remove any emergency batteries.

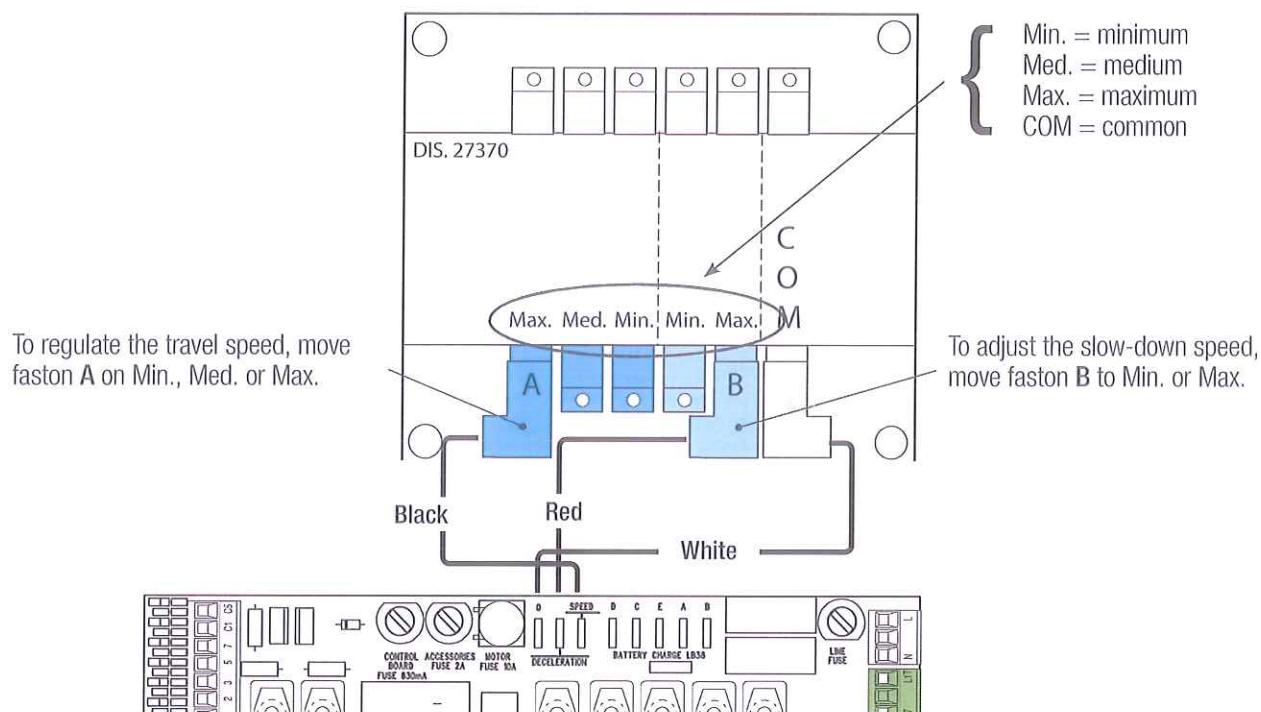


Keep pressed the PROG programming button on the control board. The programming LED flashes ④.

Press any key on the transmitter you want to memorize. The LED stays on to indicate that memorization has been successful ⑤.

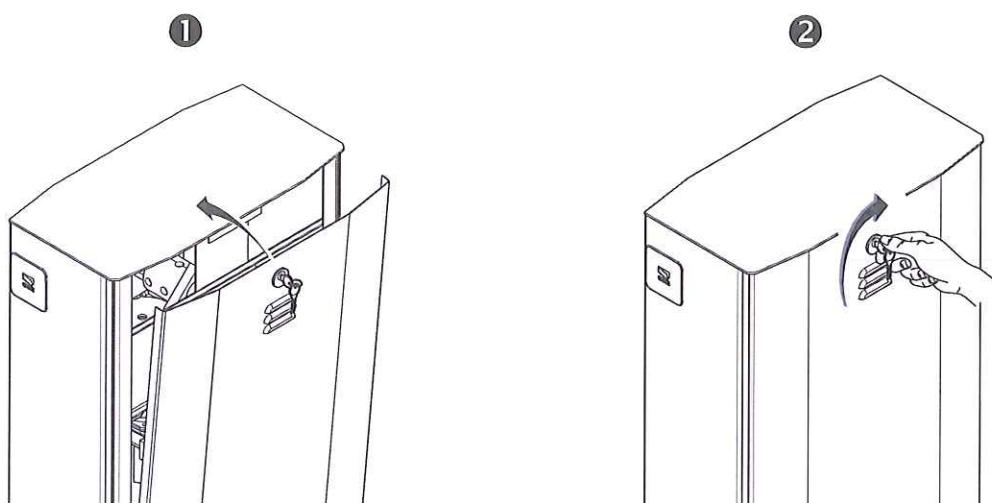


ADJUSTING THE SPEED



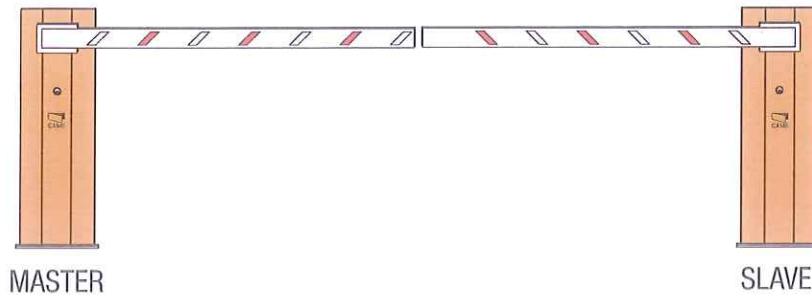
FINAL OPERATIONS

Once you've finished with the electrical connections and powered up the system, replace the inspection hatch ①, and lock it by using the key ②.

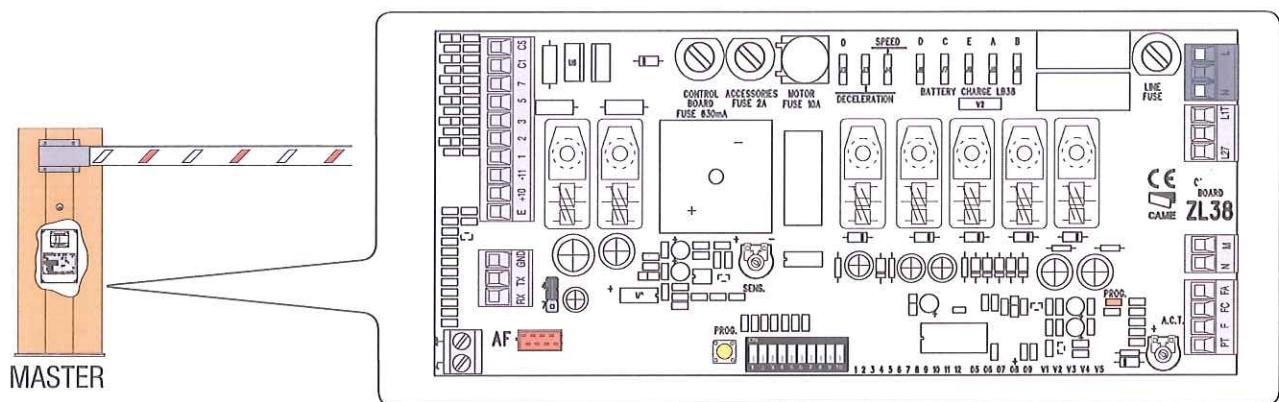


PAIRED CONNECTION WITH A SINGLE COMMAND

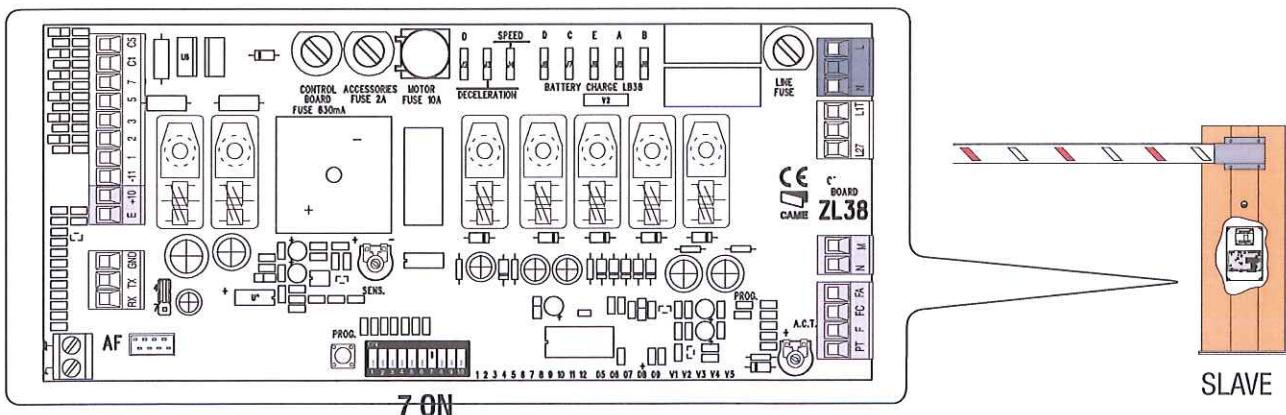
Establish the **MASTER**, that is, the motor that drives both barriers, and **SLAVE**, that is, the motor piloted by the **MASTER** motor.



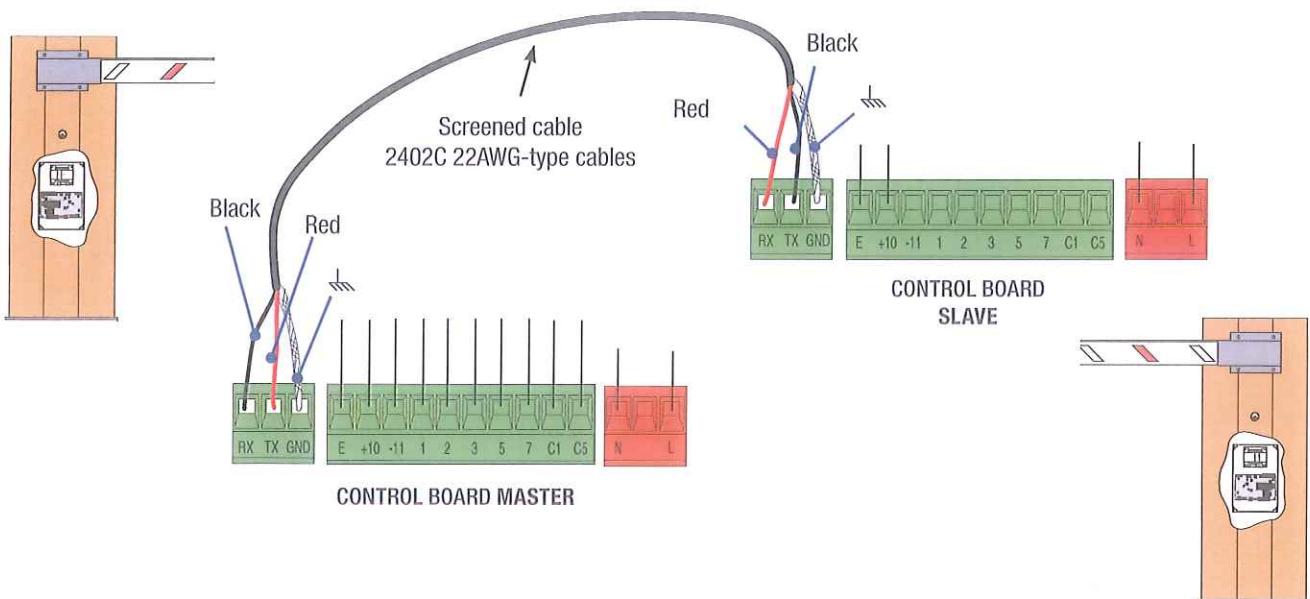
On the **MASTER** barrier's electronic board, make the necessary electrical connections, activate the radio control, program the functions and settings.



On the **SLAVE** barrier's control board, connect the power supply to L-N, the flashing light on 10-E, set DIP switch 7 to ON and adjust the travel and slow-down speeds just like on the **MASTER** barrier.



Connect the two control boards using terminals RX-TX-GND as shown in the figure.



TROUBLESHOOTING

PROBLEM	REFERENCE	CHECK
The barrier neither opens nor closes	2-3-4-6-8-18	2 - Deactivate the MAINTAINED ACTION function
The boom opens but does not close	4-7-10	3 - Check the power supply and fuses
The boom closes but does not open	4-7-9	4 - The NC contacts are open
The barrier does not automatically close	11-12-13	6 - Deactivate the MASTER-SLAVE function
The barrier does not work with the transmitter	2-14-16	7 - Check the boom's balancing and spring tautness
The boom's direction of travel is inverted	7-18	8 - Deactivate the OBSTRUCTION DETECTION function
Only one transmitter works	22	9 - Check the opening limit-switch
The photocells do not work	12-23-24	10 - Check the closing limit-switch
The warning LED flashes quickly	4	11 - Activate the AUTOMATIC CLOSING function
The warning LED stays lit	13	12 - Check the proper direction of travel
The boom does not reach the limit-switch	7	13 - Check the control devices
The boom cannot be balanced	7-15	14 - Replace the AF card
The barrier does not slow down	7-15	15 - Check the length ration between boom and applied accessories
The barrier does not work with emergency batteries	8-25-26	16 - Memorize the radio code again
The boom starts slow	7	18 - Adjust the sensitivity
		22 - Enter or duplicate the same code on all transmitters
		23 - Activate the photocells
		24 - Connect the photocells serially instead of in parallel fashion
		25 - Check the batteries
		26 - Respect the photocell's power supply polarities

DISMANTLING AND DISPOSAL

☞ CAME CANCELLI AUTOMATICI S.p.A. applies a certified Environmental Management System at its premises, which is compliant with the UNI EN ISO 14001 standard to ensure the environment is safeguarded.

Please continue safeguarding the environment. At CAME we consider it one of the fundamentals of our operating and market strategies. Simply follow these brief disposal guidelines:

☒ DISPOSING OF THE PACKAGING

The packaging materials (cardboard, plastic, and so on) should be disposed of as solid household waste, and simply separated from other waste for recycling.

Always make sure you comply with local laws before dismantling and disposing of the product.

DISPOSE OF RESPONSIBLY!

☒ DISMANTLING AND DISPOSAL

Our products are made of various materials. Most of these (aluminum, plastic, iron, electrical cables) are classified as solid household waste. They can be recycled by separating them before dumping at authorized city plants.

Whereas other components (control boards, batteries, transmitters, and so on) may contain hazardous pollutants.

These must therefore be disposed of by authorized, certified professional services.

Before disposing, it is always advisable to check with the specific laws that apply in your area.

DISPOSE OF RESPONSIBLY!

DICHIARAZIONE DI INCORPORAZIONE allegato / DECLARATION OF INCORPORATION annex / ERKLÄRUNG FÜR DEN EINBAU anhang / DECLARATION D'INCORPORATION annexe / DECLARACIÓN DE INCORPORACION anexo / DECLARAÇÃO DE INCORPORAÇÃO anexo / DEKLARACJA załącznik / INBOUWVERKLARING bijlage IIb - 2006/42/CE

Fabbricante / Manufacturer / Hersteller / Fabricant / Fabricante / Fabricante / Wytwarzca / Fabrikant

Came S.p.a.

indirizzo / address / adresse / adresse / direccìon / endereço / adres / adres
Via Martiri della Libertà 15 - 31030 Dosson di Casier, Treviso - Italy



DICHIARA CHE LA BARRIERA STRADALE / DECLARES THAT THE AUTOMATIC BARRIERS /
ERKLÄRT DASS DIE AUTOMATISCHE SCHRANKENSYSTEME / DECLARE QUE LA BARRIÈRE AUTOMATIQUE /
DECLARA QUE LA BARRERAS AUTOMÁTICAS / DECLARA QUE A BARREIRA AUTOMÁTICA /
OSWIADCZA ZE SZLABANY AUTOMATYCZNA / VERKLAART DAT DE AUTOMATISCHE SLAGBOOM

G6000 ; G6010
G6000-ELTRON
G6001-ELTRON
G6001 ; G6000X
G6000Y ; G6001-316

E' CONFORME ALLE DISPOSIZIONI DELLE SEGUENTI DIRETTIVE / IT COMPLIES WITH THE PROVISIONS OF THE FOLLOWING DIRECTIVES / DEN VORGABEN DER FOLGENDEN RICHTLINIEN ENTSPRECHEN / IL EST CONFORMES AUX DISPOSITIONS DES DIRECTIVES SUIVANTES / CUMPLEN CON LAS DISPOSICIONES DE LAS SIGUIENTES DIRECTIVAS / ESTÃO DE ACORDO COM AS DISPOSIÇÕES DAS SEGUINTE DIRECTIVAS / SA ZGODNE Z POSTANOVENIAMI NASTEPUJACYCH DYREKTYW EUROPEJSKICH / VOLDOEN AAN DE VOORSchriften VAN DE VOLGENDE RICHTLIJNEN:

- COMPATIBILITÀ ELETROMAGNETICA / ELECTROMAGNETIC COMPATIBILITY / ELEKTROMAGNETISCHE VERTRÄGLICHKEIT / COMPATIBILITÉ ÉLECTROMAGNÉTIQUE / COMPATIBILIDAD ELECTROMAGNÉTICA / COMPATIBILIDADE ELETROMAGNÉTICA / KOMPATYBILNOŚCI ELEKTROMAGNETYCZNEJ / ELEKTROMAGNETISCHE COMPATIBILITET : 2014/30/UE.

Riferimento norme armonizzate ed altre norme tecniche / Refer to European regulations and other technical regulations / Harmonisierte Bezugsnormen und andere technische Vorgaben / Référence aux normes harmonisées et aux autres normes techniques / Referência normas armonizadas y otras normas técnicas / Referência de normas harmonizadas e outras normas técnicas / Odnosne normy ujednolicone i inne normy techniczne / Geharmoniseerde en andere technische normen waarnaar is verwezen

EN 61000-6-2:2005
EN 61000-6-3:2007+A1:2011
EN 62233:2008
EN 60335-1:2012+A11:2014

RISPETTA I REQUISITI ESSENZIALI APPLICATI: / MEET THE APPLICABLE ESSENTIAL REQUIREMENTS: / DEN WESENTLICHEN ANGEWANDTEN ANFORDERUNGEN ENTSPRECHEN: / RESPECTENT LES CONDITIONS REQUISES NECESSAIRES APPLIQUÉES / CUMPLEN CON LOS REQUISITOS ESENCIALES APPLICADOS: / RESPEITAM O REQUISITOS ESSENCIAIS APPLICADOS: / SPEŁNIAJĄ PODSTAWOWE WYMAGANIE WYRUNKI: / VOLDOEN AAN DE TOEPASBARE MINIMUM EISEN:

1.1.3; 1.1.5; 1.2.1; 1.2.2; 1.3.2; 1.3.7; 1.3.8.1; 1.4.1; 1.4.2; 1.5.1; 1.5.6; 1.5.8; 1.5.9; 1.5.9; 1.5.13; 1.6.1; 1.6.3; 1.6.4;
1.7.1; 1.7.2; 1.7.4

PERSONA AUTORIZATA A COSTITUIRE LA DOCUMENTAZIONE TECNICA PERTINENTE / PERSON AUTHORISED TO COMPILE THE RELEVANT TECHNICAL DOCUMENTATION / PERSON DIE BEVOLMÄCHTIGT IST, DIE RELEVANTEN TECHNISCHEN UNTERLAGEN ZUSAMMENZUSTELLEN / DOCUMENTATION TECHNIQUE SPECIFIQUE D'AUTORISATION A CONSTRUIRE / PERSONA FACULTADA PARA ELABORAR LA DOCUMENTACIÓN TÉCNICA PERTINENTE / PESSOA AUTORIZADA A CONSTITUIR A DOCUMENTAÇÃO TÉCNICA PERTINENTE / OSOBA UPOWAŻNIONA DO ZREDAGOWANIA DOKUMENTACJI TECHNICZNEJ / DEGENE DIE GEMÄCHTIGD IS DE RELEVANTE TECHNISCHE DOCUMENTEN SAMEN TE STELLEN.

CAME S.p.a.

La documentazione tecnica pertinente è stata compilata in conformità all'allegato VIIb. / The pertinent technical documentation has been drawn up in compliance with attached document VIIb. / Die relevante technische Dokumentation wurde entsprechend der Anlage VIIb ausgestellt. / La documentation technique spécifique a été remplie conformément à l'annexe I/b. / La documentación técnica pertinente ha sido redactada en cumplimiento con el anexo VIIb. / A documentação técnica pertinente foi preenchida de acordo com o anexo VIIb. / Odnosna dokumentacija techniczna zostala zredagowana zgodnie z załącznikiem VIIb. / De technische documentatie terzake is opgesteld in overeenstemming met de bijlage VIIb.

CAME S.p.a. si impegna a trasmettere, in risposta a una richiesta adeguatamente motivata delle autorità nazionali, informazioni pertinenti sulle quasi macchine, e / Came S.p.A., following a duly motivated request from the national authorities, undertakes to provide information related to the quasi machines, and / Die Firma Came S.p.A. verpflichtet sich auf eine angemessener motivierte Anfrage der staatlichen Behörden Informationen über die unvollständigen Maschinen, zu übermitteln, und / Came S.p.A. s'engage à transmettre, en réponse à une demande bien fondée de la part des autorités nationales, les renseignements relatifs aux quasi machines / Came S.p.A. se compromete a transmitir, como respuesta a una solicitud adecuadamente fundada por parte de las autoridades nacionales, informaciones relacionadas con las quasi máquinas / Came S.p.A. compromete-se em transmitir, em resposta a uma solicitação motivada apropriadamente pelas autoridades nacionais, informações pertinentes às partes que componham máquinas / Came S.p.A. zobowiązuje się do udzielenia informacji dodatkowych maszyn nieukończonych na odpowiednio umotywowaną prośbę, złożoną przez kompetentne organy państwowe / Came S.p.A. verbindt zich ertso om op met redenen omkleed verzoek van de nationale autoriteiten de relevante informatie voor de niet voltooide machine te verstrekken,

VIETA / FORBIDS / VERBIEDET / INTERDIT / PROHIBE / PROIBE / ZABRANIA SIE / VERBIEDT

la messa in servizio finchè la macchina finale in cui deve essere incorporata non è stata dichiarata conforme, se del caso alla 2006/42/CE, / commissioning of the above mentioned until the moment when the final machine into which they must be incorporated, has been declared compliant, if pertinent, to 2006/42/CE / die Inbetriebnahme bevor die „Endmaschine“ in die die unvollständige Maschine eingebaut wird, als konform erklärt wurde, gegebenenfalls gemäß der Richtlinie 2006/42/EU. / la mise en service tant que la machine finale dans laquelle elle doit être incorporée n'a pas été déclarée conforme, le cas échéant, à la norme 2006/42/CE. / la puesta en servicio hasta que la máquina final en la que será incorporada no haya sido declarada de conformidad de acuerdo a la 2006/42/CE / a colocación em funcionamento, até que a máquina final, onde devem ser incorporadas, não for declarada em conformidade, se de acordo com a 2006/42/CE. / Uzuruchomienia urządzeń do czasu, kiedy maszyna, do której ma być wbudowany, nie zostanie oceniona jako zgodna z wymogami dyrektywy 2006/42/WE, jeśli tak procedura była konieczna. / deze in werking te stellen zolang de eindmachine waarin de niet voltooide machine moet worden ingebouwd in overeenstemming is verkaard, indien toepasselijk met de richtlijn 2006/42/EG.

Dosson di Casier (TV)
5 Marzo / March / März / Mars / Marzo
/ Março / Marzec / Maart 2018

Legale Rappresentante / Legal Representative / Gesetzlicher Vertreter / Representant Legal / Representante Legal / Representante Legal / Prawny Przedstawiciel / Juridische Vertegenwoordiger

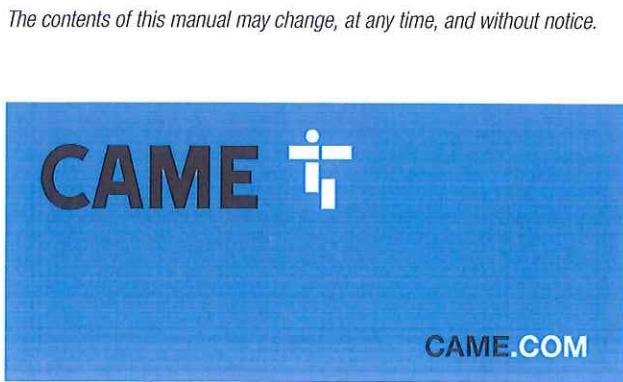
Paolo Menuzzo

Fascicolo tecnico a supporto / Supporting technical dossier / Unterstützung technische Dossier / soutien dossier technique / apoyo expediente técnico / apoiar dossier técnico / wsparcie dokumentacji technicznej / ondersteunende technische dossier: 001G6000

Came S.p.a.

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The contents of this manual may change, at any time, and without notice.

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