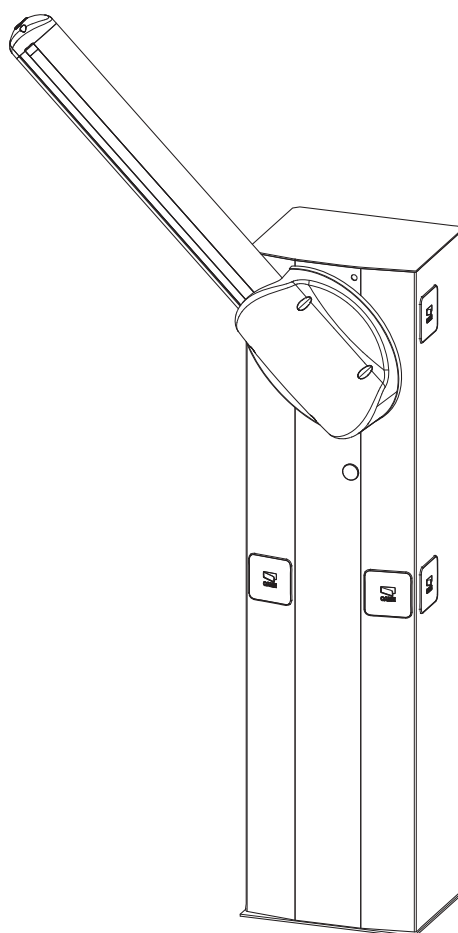


STREET BARRIERS

GARD
SERIES



INSTALLATION MANUAL

G3750

Index

Legend of symbols	p. 4
Intended use and limits to use	p. 4
Intended use	p. 4
Limits to use	p. 4
Description	p. 4
Technical data	p. 5
Description of parts	p. 5
Installation	p. 6
Preliminary checks	p. 6
Tools and materials	p. 6
Dimensions	p. 6
Types of cables and thicknesses	p. 7
Standard installation	p. 7
Preparing the anchoring base	p. 8
Installing the operator	p. 9
Balancing the barrier arm	p. 12
Adjusting endpoints	p. 14
Manual release of the barrier arm	p. 16
Description of the control panel	p. 16
Technical data	p. 16
Main component parts	p. 17
Electrical connections	p. 17
Gearmotor and endstops	p. 17
Power source and accessories	p. 18
Command devices	p. 18
Warning devices	p. 19
Safety devices	p. 19
Adjusting manouvring and braking speeds	p. 19
Selecting functions	p. 20
Adjustments	p. 20
Activating the radio command	p. 21
Antenna	p. 21
Radiofrequency card	p. 21
Transmitters	p. 21
Memorisation	p. 22
Connecting two coupled barriers	p. 23
Safety instructions	p. 24
Maintenance	p. 24
Periodic maintenance	p. 24
Extraordinary maintenance	p. 25
Trouble shooting	p. 26
Dismantling and disposal	p. 26
CE Compliance statement	p. 27

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.

Legend of symbols



This symbol means parts must be read carefully.



This symbol means the parts describe safety issues.



This symbol tells you what to notify to the user.

Intended use and limits to use

Intended use

The 001G3750 automatic barrier is designed and built by CAME Cancelli Automatici S.p.A. in compliance with current safety regulations for use in private or public parking facilities and in residential and high-density flow areas.



Every installation and use other than that specified in this manual is forbidden.

Limits to use

Passage width up to 3.75 metres with 2 to 6 seconds opening time.

Description

The cabinet is made of 2 mm-thick galvanised steel sheeting and varnished with epoxy powders. Features to complement with dedicated Came accessories.

The anchoring base is made of galvanised steel and has four clamps with securing nuts. The arm-attachment flange makes for quick and safe blocking of the arm. Inside there are: control panel, mechanical safety stops, endstop assembly, balancing spring and irreversible gearmotor with die-cast aluminium case. The gearmotor features an endless screw based reduction system which is lubricated by permanent fluid grease with rotating parts on lubricated bearings.

001G3750 - Barrier made of varnished galvanised steel ready-to-fit accessories.

001G3751 - Barrier made of satin-finish stainless steel ready-to-fit accessories.

Accessories for: 001G3750 - 001G3751

001G03750 - Tubular barrier arm with semi-elliptical section made of white-varnished aluminium L = 4 m, complete with raceway cover profile and anti-impact profile;

001G0402 - White varnished tubular aluminium barrier arm $\varnothing = 60$ mm L = 4 m;

001G02040 - Balancing spring $\varnothing = 40$ mm (yellow);

001 G04060 - Balancing spring $\varnothing = 50$ mm (verde);

001 G06080 - Balancing spring $\varnothing = 55$ mm (rossa);

Accessories for the 001G03750:

001G03755DX - Tube joint for semi-elliptical right-hand barrier;

001G03755SX - Tube joint for left-hand semi-elliptical barrier;

001G03756 - Internal reinforcement for semi-elliptical barrier arm;

001G028401 - Luminous cord;

001G028402 - Cable for connecting luminous cord;

three 12 V - 6 Ah emergency batteries;

001G02807 - Fixed support for barrier arm;

001G02808 - Swing leg support;

001G0468 - Support for applying DELTA-I and DELTA-SI photocells;

001G04601 - Adaptor for Kiaro series Flashing light application (with 001KIAROS support);

001G0465 - Aluminium skirt (2 m modules);

001G02809 - Red reflective adhesive strips (20 piece package).

WARNINGS!

001G02808 For passage widths of max 3 m.

001G03756 OBLIGATORY on barrier booms for passage widths of over 3 m or with the 001G028401 luminous cord.

OBLIGATORY on barrier booms for passage width of over 2.5 m fitted with the 001G02808 swing-leg or 001G0465 skirt.

001G02807 For passage widths of over 3.5 m the swing-leg is mandatory .

001G0465 - 001G02808 cannot be used together.

Important! Check that the command, safety equipment and accessories are CAME originals; this will ensure easy installation and maintenance of your system.

Technical data

Motor power supply (V): 24 V DC 50 / 60 Hz
Maximum draw: 15 A
Power: 300 W
Maximum Torque: 200 Nm
Reduction ratio: 1/202

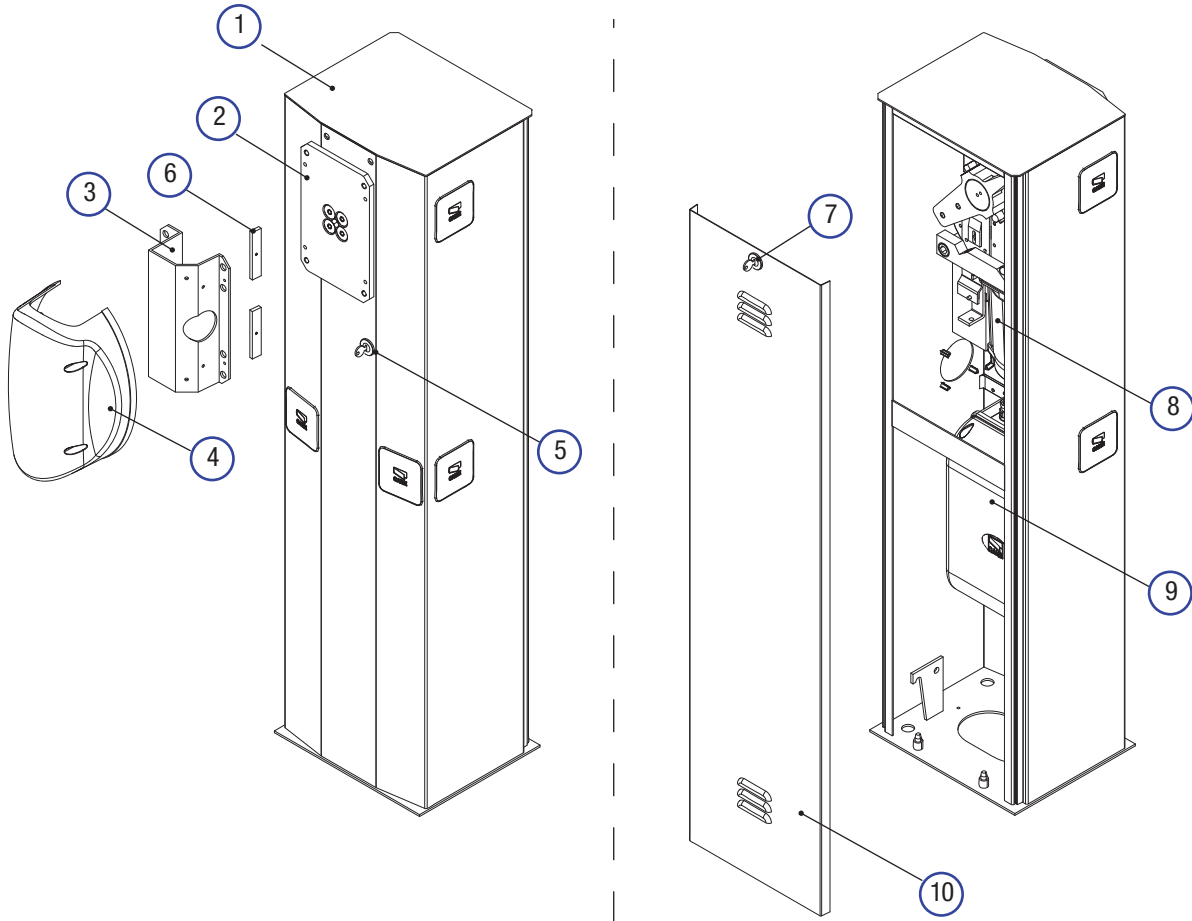
Opening time: 2÷6 sec.
Duty cycle: Intensive use
IP protection rating: IP54
Weight: 47 kg
Insulation class: I



Description of parts

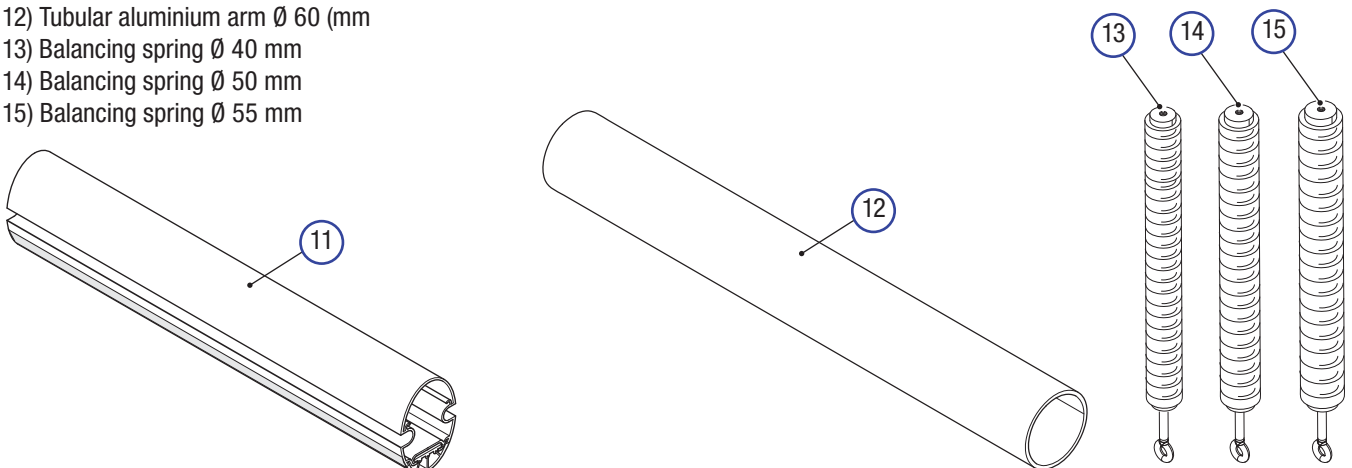
BARRIER

- 1) Cabinet
- 2) Transmission shaft
- 3) arm-attachment cover
- 4) Anti-shearing protective cover
- 5) Gearmotor release with customised key
- 6) 001G0402 shim for barrier
- 7) Hatch lock with customised key
- 8) Gearmotor
- 9) Control panel
- 10) Inspection hatch

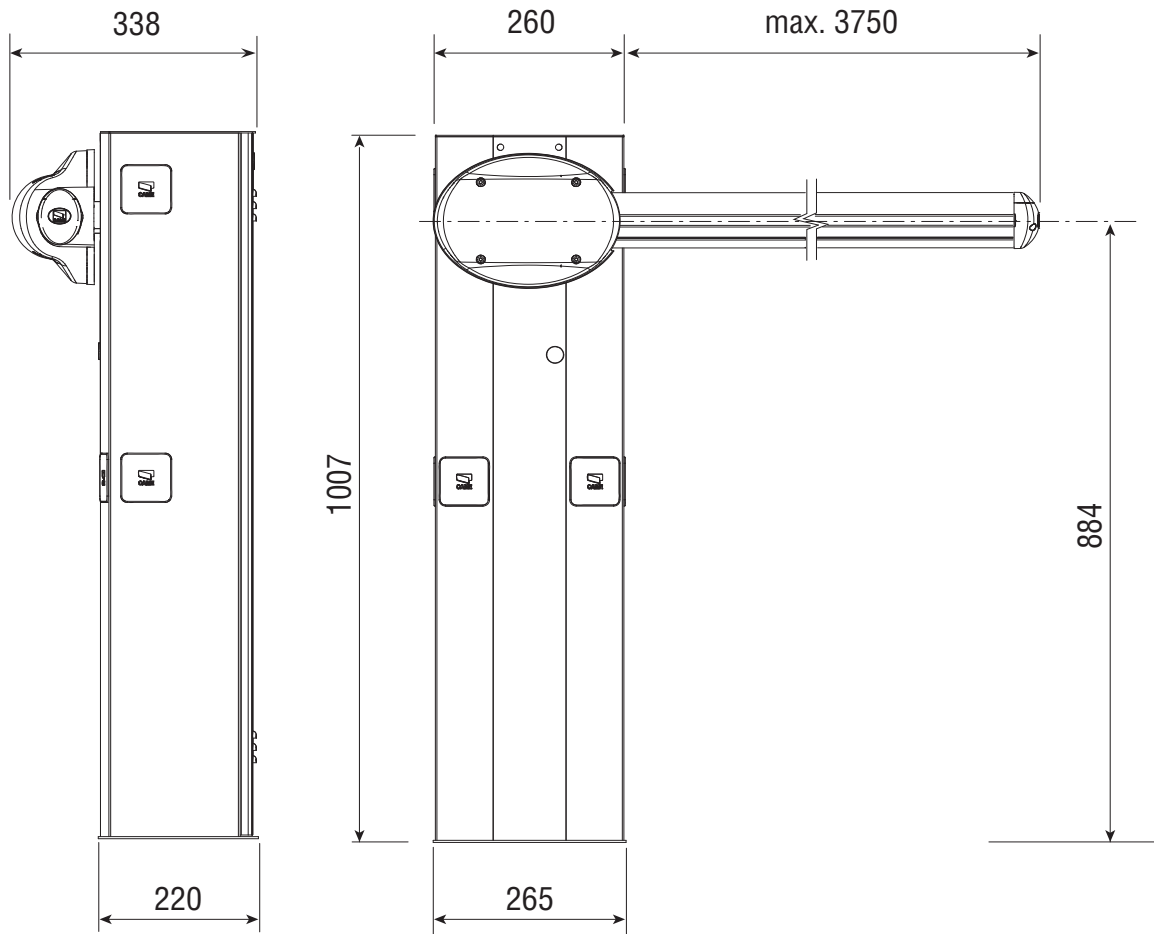


ACCESSORIES

- 11) Semi-elliptical arrier arm complete with anti-impact profile and raceway cover
- 12) Tubular aluminium arm Ø 60 (mm)
- 13) Balancing spring Ø 40 mm
- 14) Balancing spring Ø 50 mm
- 15) Balancing spring Ø 55 mm



Dimensions



Installation

 Installation must be carried by skilled, qualified technicians in accordance with current regulations.

Preliminary checks

 Before beginning to install, the following is necessary:

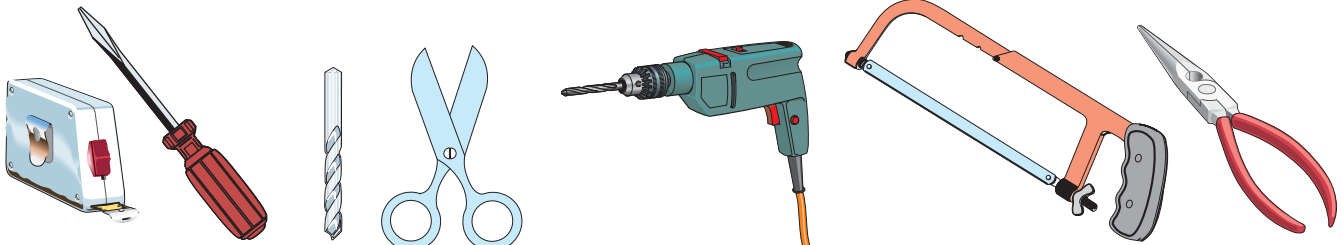
Set up a suitable omnipolar cut-off device, with distances greater than 3 mm between contacts, with sectioned power source;

- Set up proper conduits and electric cable raceways, making sure these are protected from any mechanical damage;
- Set up a drainage tube to prevent moisture stagnation that may cause oxidation;
- Check that any connections inside the container (made for continuity purposes of the protective circuit) be fitted with extra insulation compared to other internal conductive parts;



Tools and materials

Make sure you have all the tools and materials needed to carry out the installation in total safety and in accordance with current regulations. The figure shows some examples of equipment used by installers



Types of cables and thicknesses

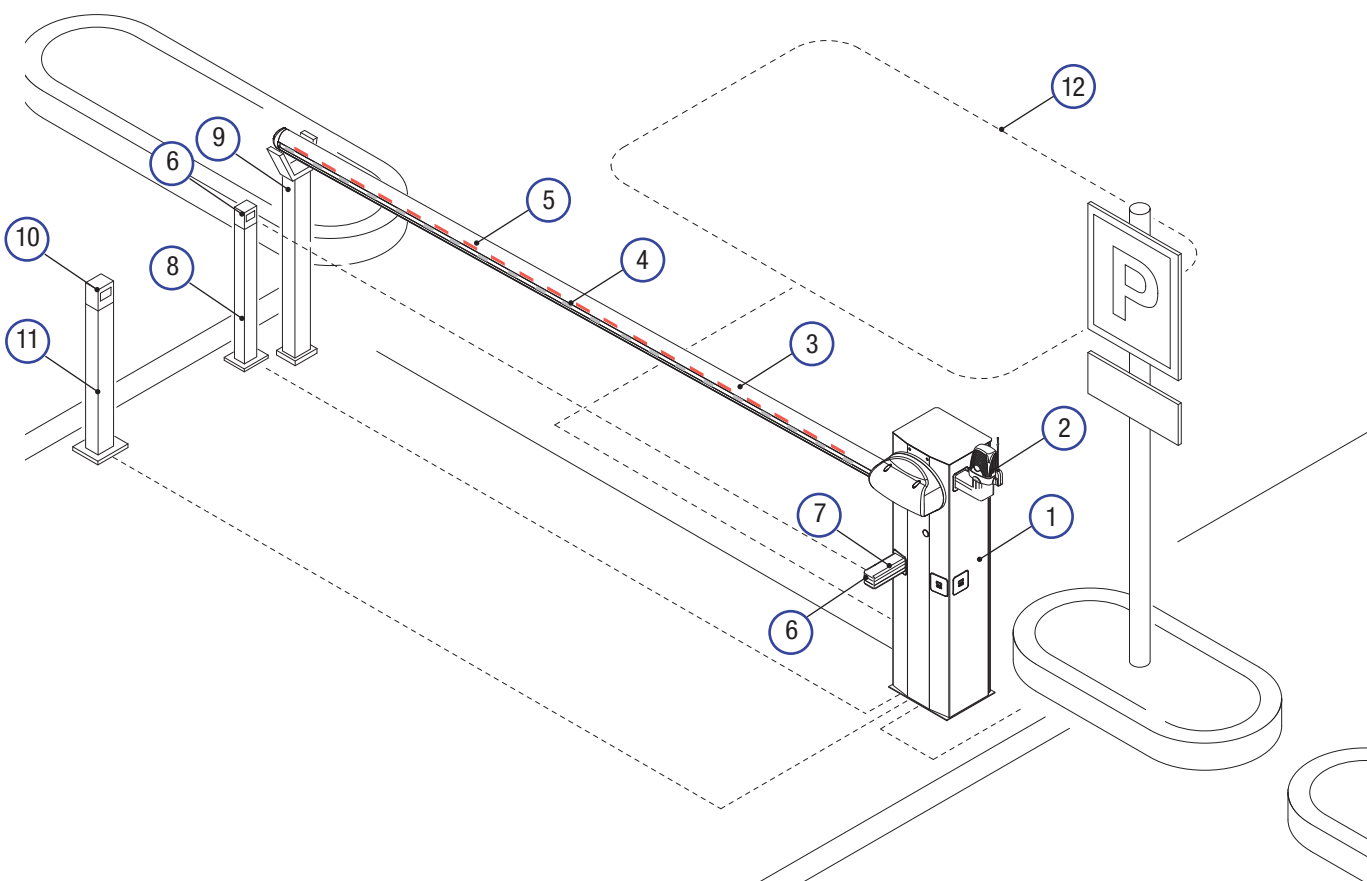
Connection	Cable type	Cable length 1 < 10 m	Cable length 10 < 20 m	Cable length 20 < 30 m
230 V power source to control panel	FROR CEI 20-22 CEI EN 50267-2-1	3G x 1.5 mm ²	3G x 1,5 mm ²	3G x 2,5 mm ²
Motor power supply (V) 24 V		3G x 1.5 mm ²	3G x 1.5 mm ²	3G x 2.5 mm ²
Flashing light		2 x 1.5 mm ²	2 x 1.5 mm ²	2 x 1.5 mm ²
TX photocells		2 x 1.5 mm ²	2 x 0.5 mm ²	2 x 0.5 mm ²
RX photocells		4 x 0.5 mm ²	4 x 0.5 mm ²	4 x 0.5 mm ²
Accessories power source		2 x 0.5 mm ²	2 x 0.5 mm ²	2 x 1 mm ²
Safety and command devices		2 x 0.5 mm ²	2 x 0.5 mm ²	2 x 0.5 mm ²
Connecting the antenna	RG58	max. 10 m		

N.B. If cables are of a different length than that shown in the table, determine the cable section based on the actual draw and the number of connected devices and according to what is set forth in the CEI EN 60204-1 code of regulations.

For connections featuring several loads on the same line (i.e. sequential ones), the dimensions shown on the table must be reconsidered according to the total draw and actual distances. When connecting products not featured in this manual, only refer to the literature accompanying such products.

Standard installation

- | | |
|--------------------------|---|
| 1) 001G3750 barriers | 7) Support for photocells |
| 2) Flashing light | 8) Small column for photocells |
| 3) Semi-elliptical | 9) Fixed support |
| 4) Luminous cord | 10) Command device (i.e. keyboard, magnetic key, transponder, etc.) |
| 5) Red reflective strips | Stand for command device |
| 6) Photocells | Metal mass detector |

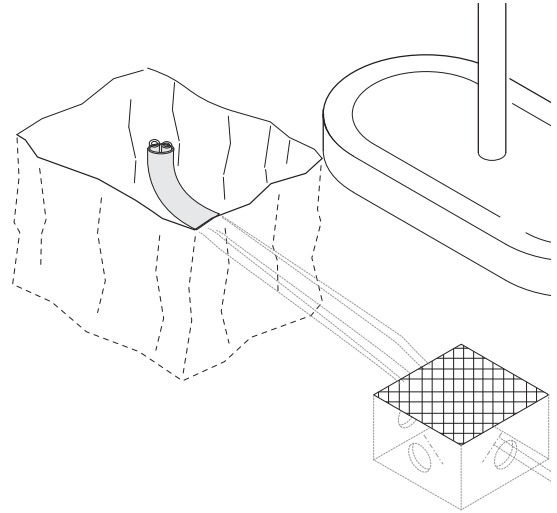
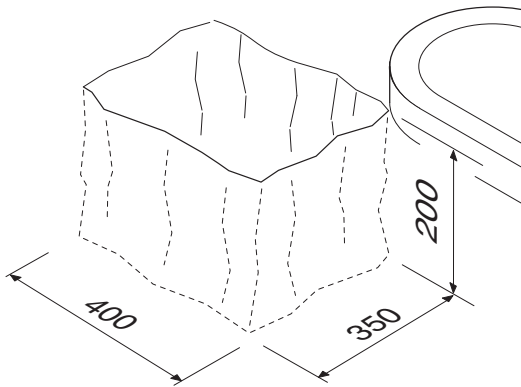


Preparing the anchoring base

⚠ The following illustrations are just examples, in that the space for securing the operator and accessories depends on the overall measurements. It is up to the installer to choose the most suited solution.

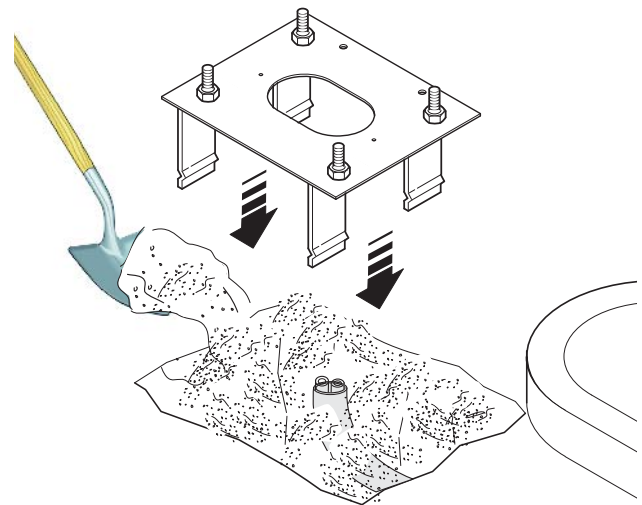
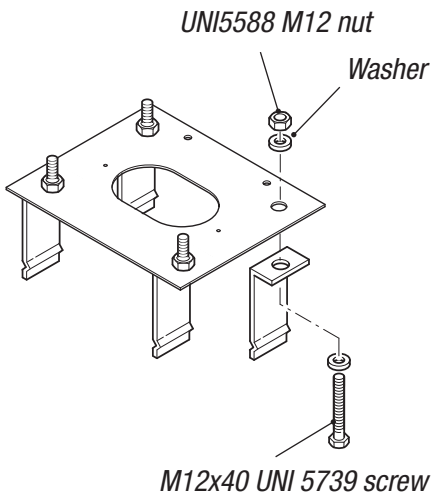
Dig a pit for the anchoring base, set up the needed corrugated tubes for connections coming from the junction pit.

N.B. the number of tubes depends on the type of installation and accessories used.

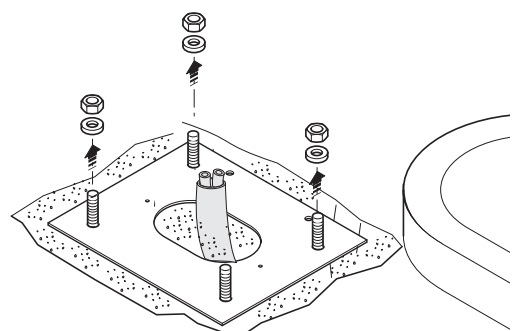
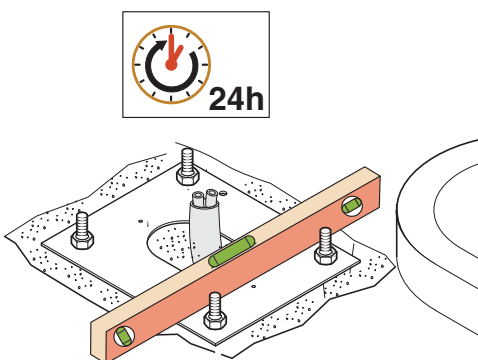


Assemble the four clamps to the anchoring base.

Fill the pit with cement, submerge the base making sure that the corrugated tubes pass through the hole on the base. The base must be perfectly level, clean and with the bolt threading completely on the surface.



Wait at least 24 hrs for everything to solidify. Remove the nuts and washers from the threaded bolts.

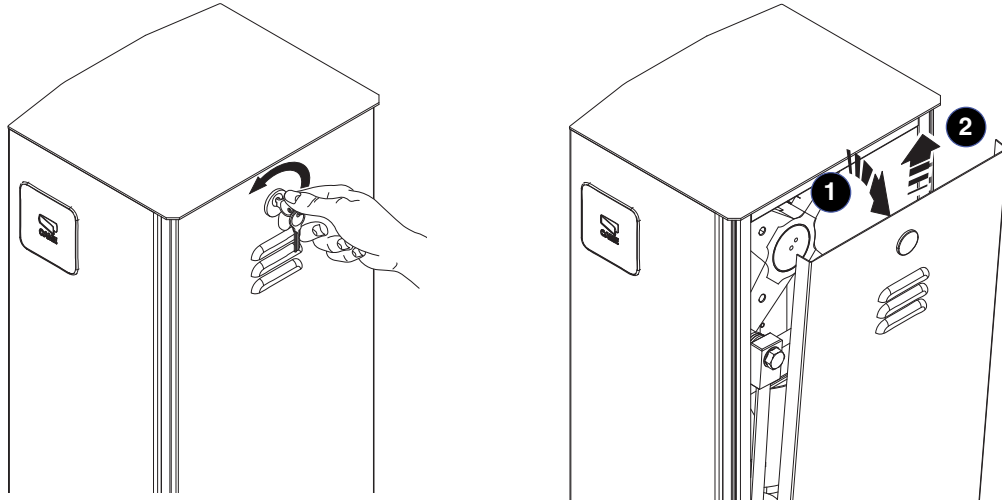


Installing the operator

⚠ Warning: the barrier must be mounted by at least two persons. Use proper hoisting equipment to transport and position the barrier.

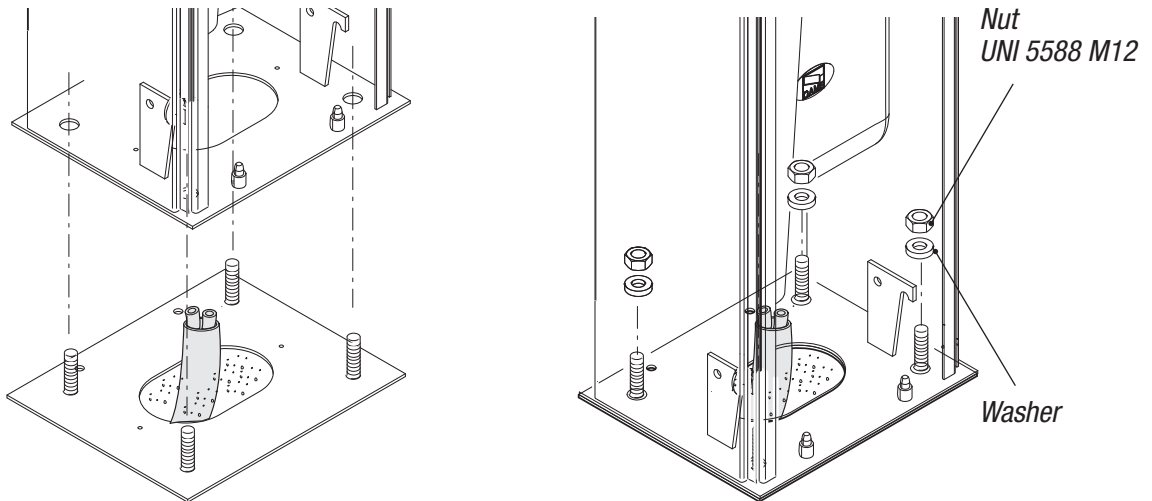
During mounting phase, the barrier may be unstable. Do rest against barrier until fully mounted, to avoid any tumbling over. The illustrations shown in this manual refer to the 001G03750 semi-elliptical barrier.

Insert the customised key into the lock and turn it counterclockwise. Remove the inspection door from the cabinet.



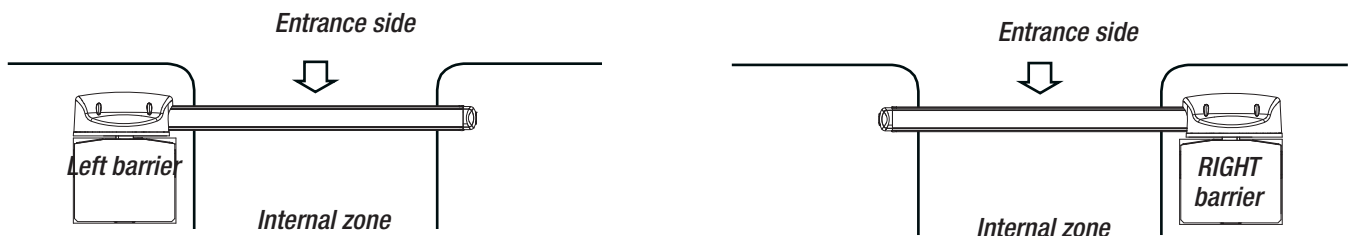
Position the cabinet to the anchoring base and secure it using the washers and nuts.

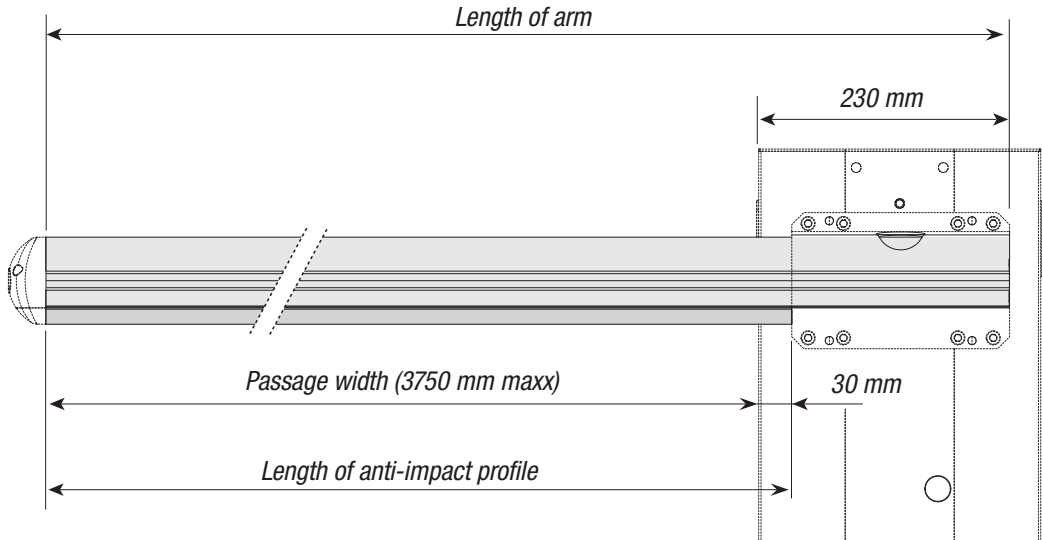
Note: install the cabinet with the inspection door facing an easily accessible direction.



Important! The barriers are set up to be mounted on the left (illustrations shown in this manual). When ordering state if you require a right-hand barrier.

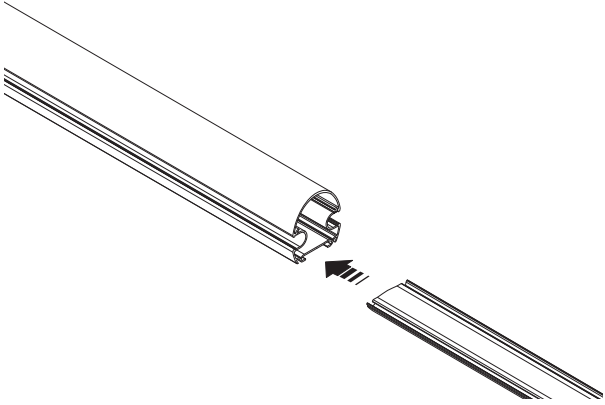
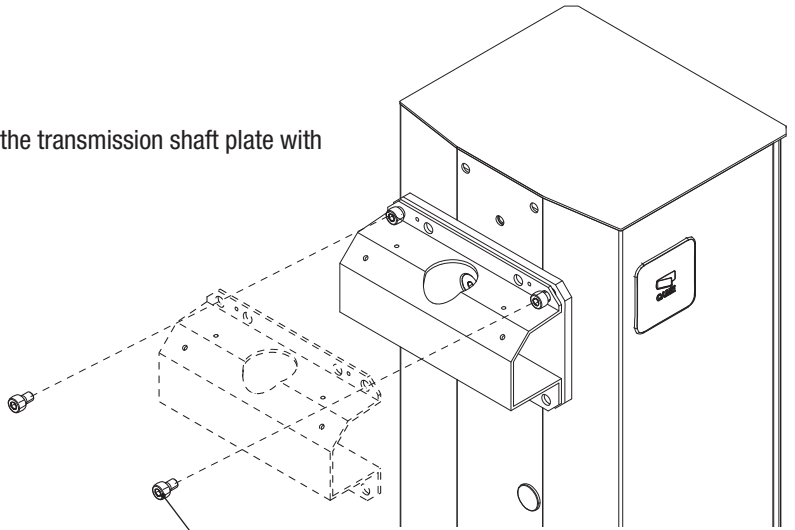
To change rotation at a later date, request documentation from authorised dealer or directly contact the Came office near you (see last page or www.came.com)





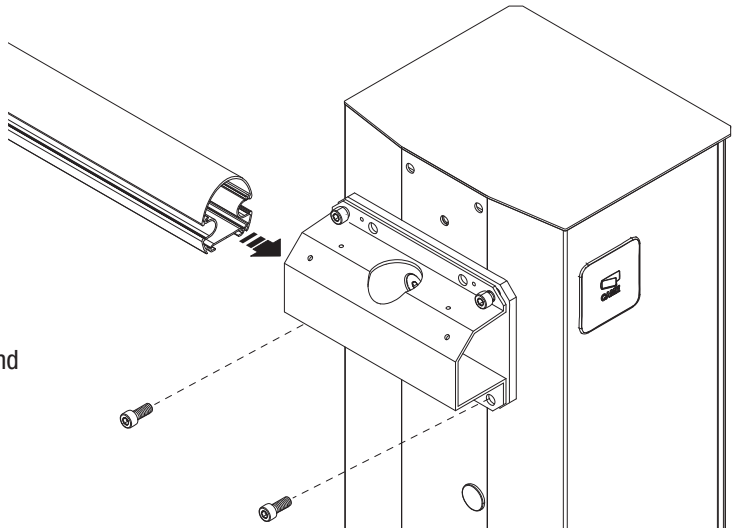
Calculate the **length of the arm** and of the anti-impact profile **using as reference the length of the passage width**. . If necessary, cut off any excess length.

Position the arm attachment cover onto the transmission shaft plate with only one screw and leave this loosened.

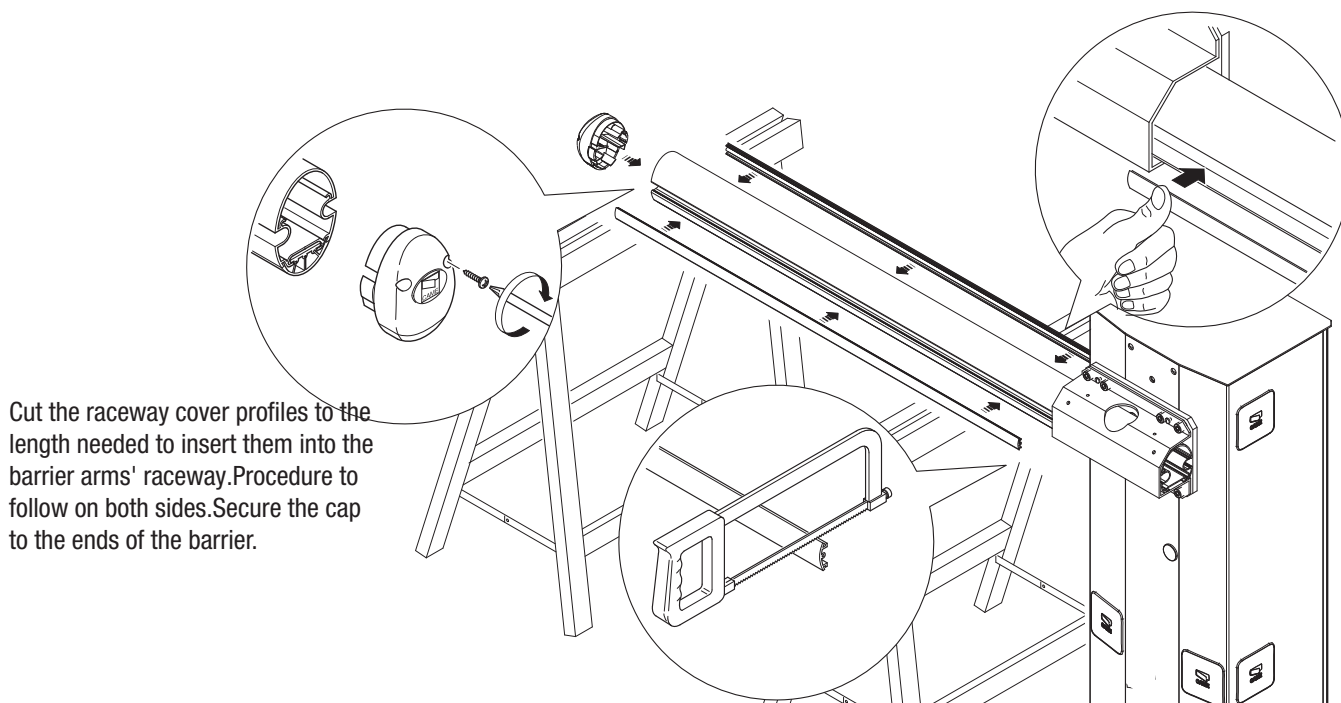
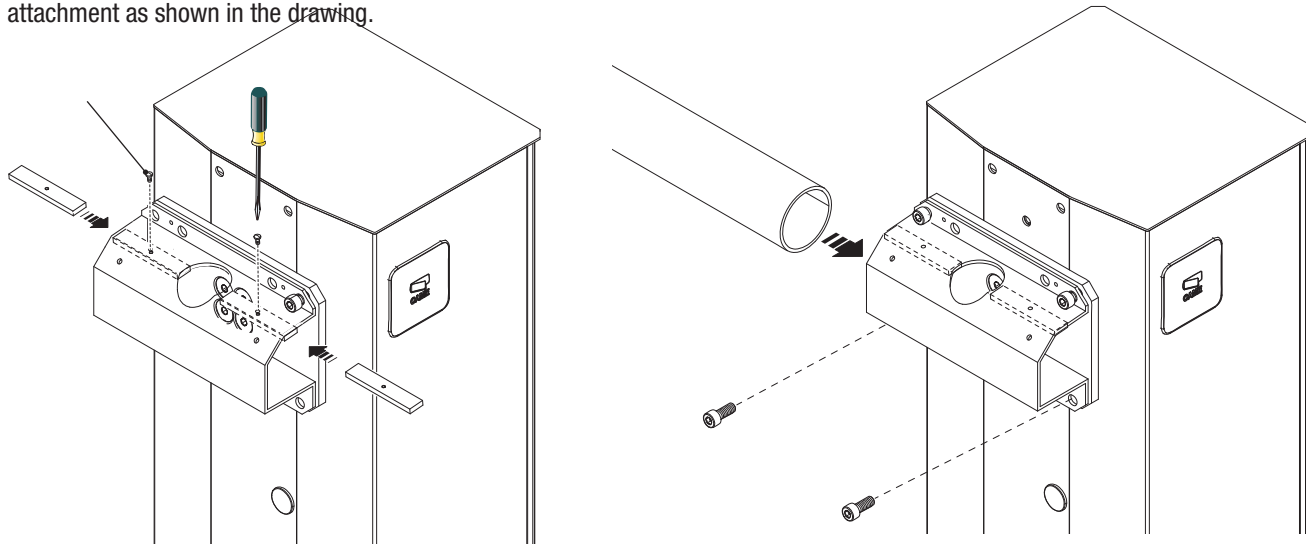


Insert the anti-impact profile into the lower part of the arm.

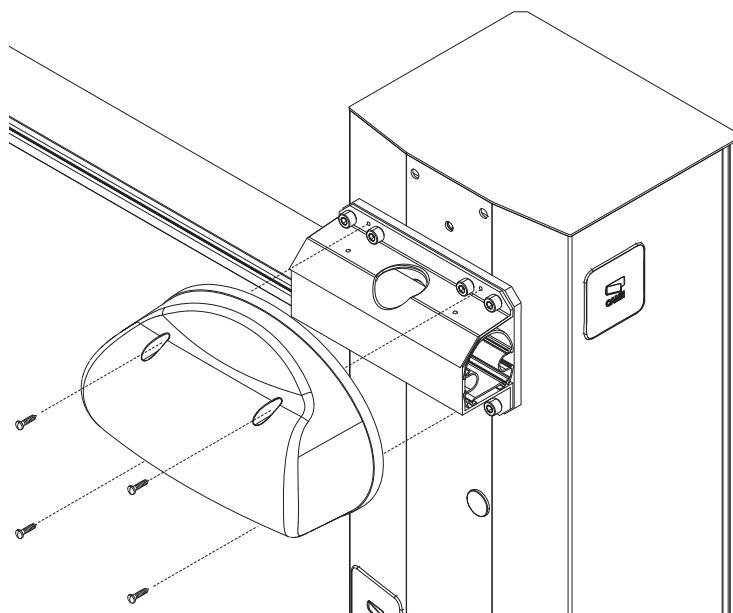
Insert the barrier into the arm attachment cover and secure it with the screws.



Note: for mounting with 001G0402 barrier arm, insert and secure two shims (supplied with the barrier arm) into the arm attachment as shown in the drawing.



Cut the raceway cover profiles to the length needed to insert them into the barrier arms' raceway. Procedure to follow on both sides. Secure the cap to the ends of the barrier.



Insert and secure the anti-shearing protective cover onto the arm-attachment cap.

Balancing the barrier arm

ENGLISH

G03750

Before balancing the barrier arm, check the table below, the congruence among the chosen spring, accessories to apply and passage width:



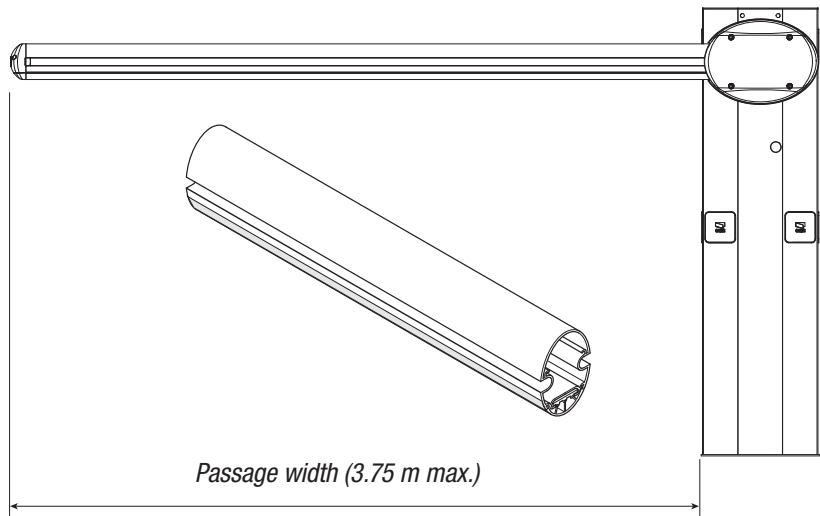
001G02040 Ø 40 mm spring
YELLOW



001G04060 Ø 50 mm spring
GREEN



001G06080 Ø 55 mm spring
RED



Passage width (m)

1.5 1.75 2.0 2.25 2.5 2.75 3.0 3.25 3.5 3.75

Simple barrier arm* + anti-impact profile	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Red	Red	Red
Simple barrier arm * anti-impact profile + luminous cord	Yellow	Yellow	Yellow	Green	Green	Green	Green	Red	Red	Red
Simple barrier arm* + skirt	Yellow	Green	Green	Green	Green	Green	Red	Red	Diagonal	Diagonal
Simple barrier arm* luminous cord + skirt	Yellow	Green	Green	Green	Green	Green	Red	Red	Diagonal	Diagonal
Simple barrier arm* anti-impact + swing leg support	Yellow	Green	Green	Green	Green	Green	Red	Red	Diagonal	Diagonal
Simple barrier* + anti-impact profile + luminous cord + swing leg support	Yellow	Green	Green	Green	Green	Green	Red	Red	Diagonal	Diagonal

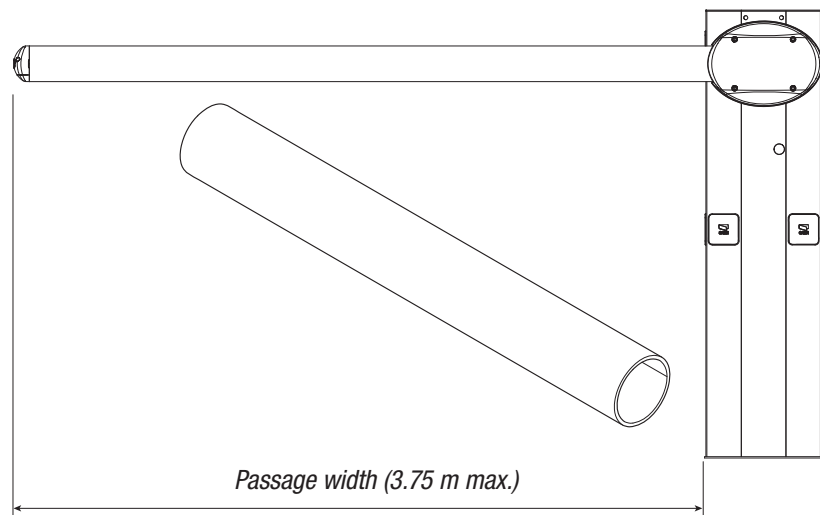
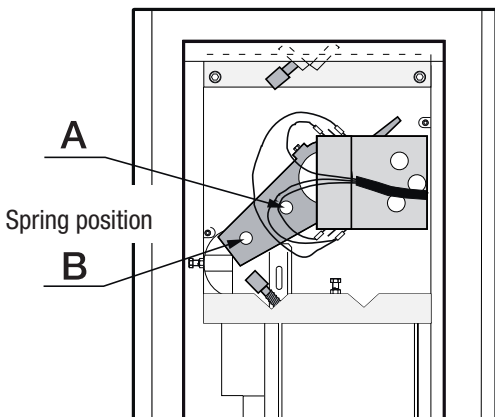
*A simple barrier arm is complete with transparent channel cover and endcap.

G0402

Before balancing the barrier arm, see below table for congruence of spring position, accessory item and courtesy light.



001G04060 Ø 50 mm spring
GREEN

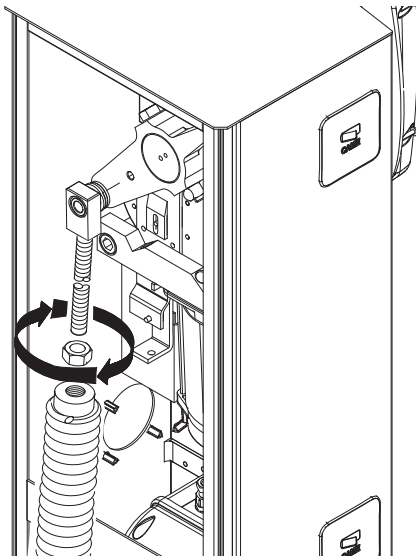
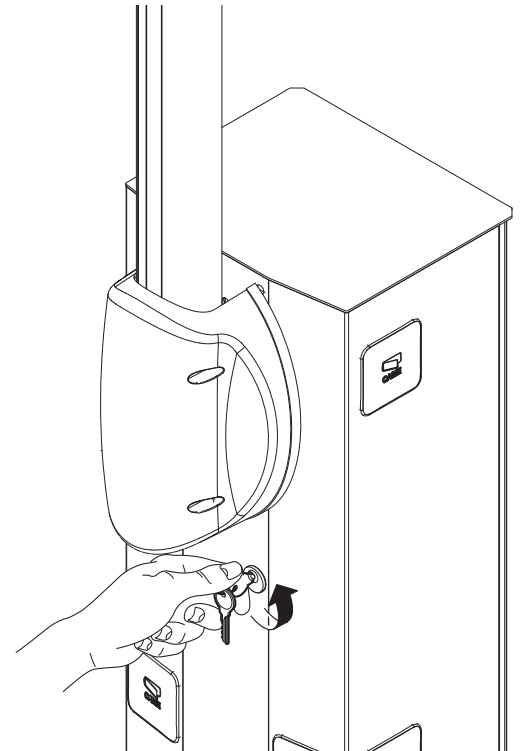
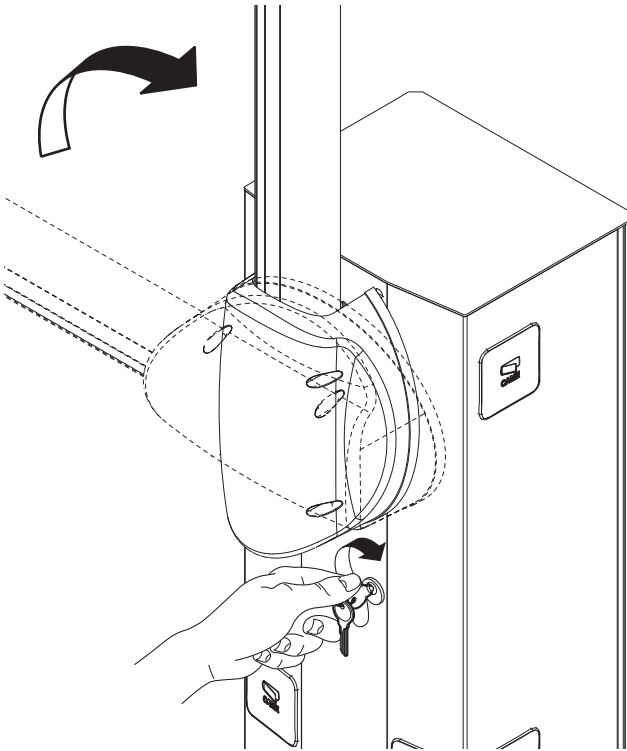


Passage width (m)

1.5 2.0 2.5 3.5 3.75

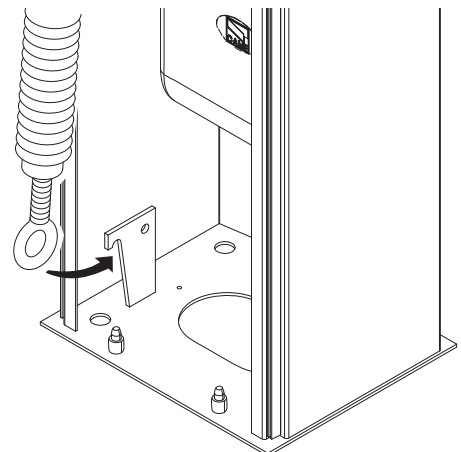
barrier arm	A	A	A	B
barrier arm + skirt or swing leg support	A	A	Diagonal	Diagonal

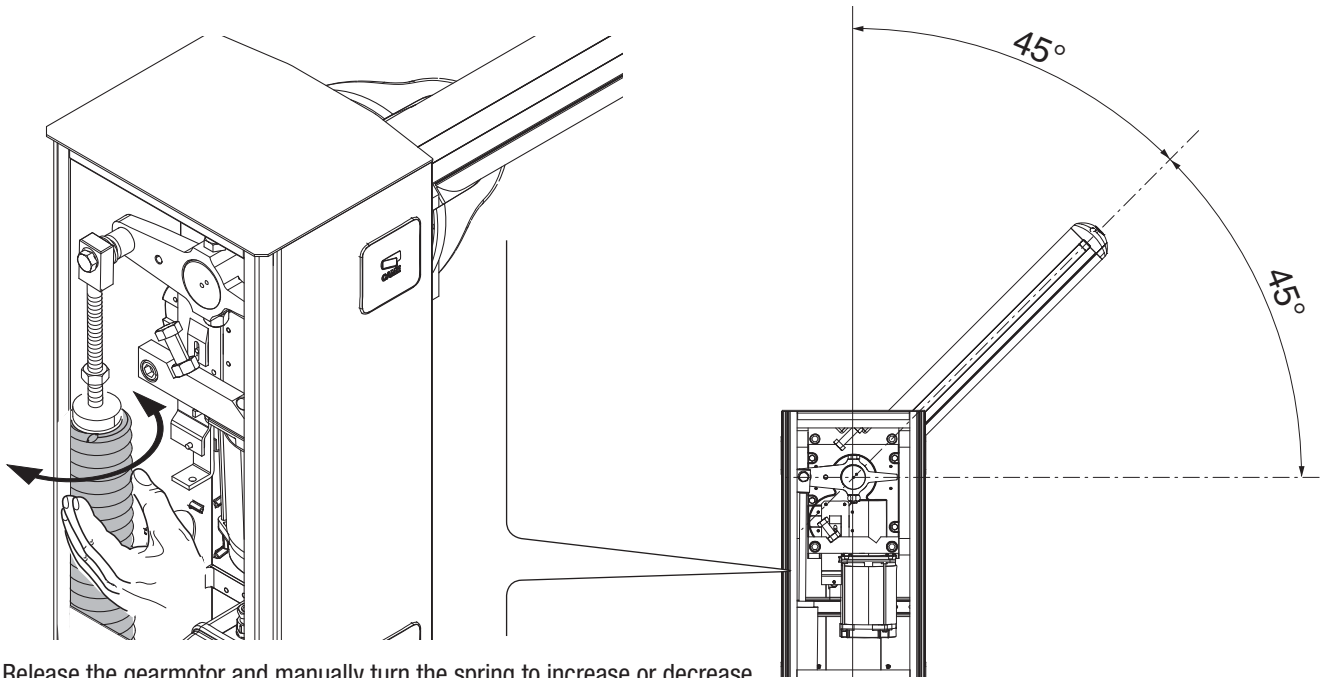
Release the gearmotor, position the barrier arm vertically and relock the gearmotor.



Tighten the screw on the anchoring which is hooked to the transmission shaft.

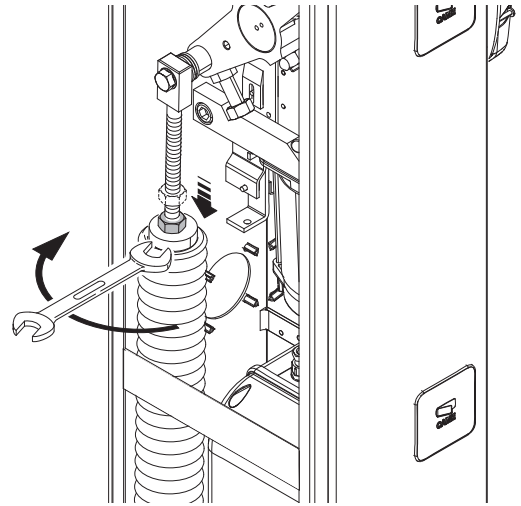
Hook the eyelet piece of the spring to the anchoring bracket.





Release the gearmotor and manually turn the spring to increase or decrease traction. The barrier arm must stabilise at 45°.

Lock the rod securing nut on the spring.



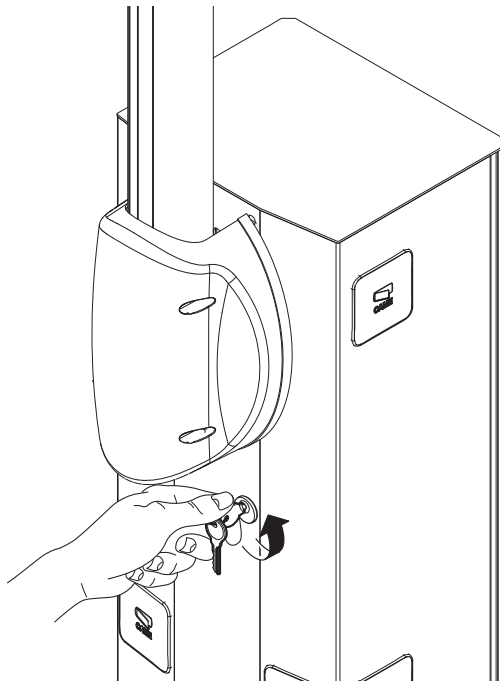
Relock the gearmotor.

Note: Check proper working order of the spring:

- with barrier arm in vertical position, the spring is not under tension.
- with barrier arm in horizontal position, the spring is loaded.

Warning! When balancing procedures are finished, LUBRICATE THE SPRINGS WITH SPRAY GREASE!

Proceed with electrical connections on control panel (see electrical connections paragraph)



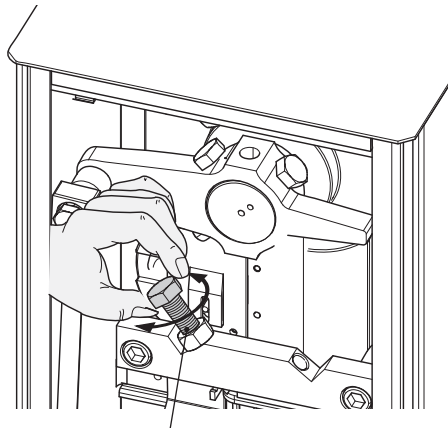
Adjusting endpoints

NB: procedure to carry out after making electrical connections to the control panel.

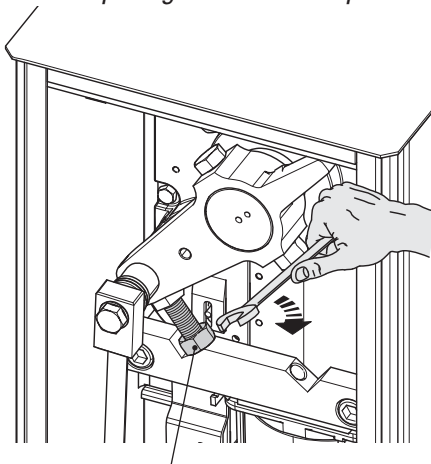
Close the inspection hatch and power up the system. Activate the arm to check whether it is parallel to the road surface when close and at about 89° when open.

Warning! For added safety, any barrier arm opening and closing actions must be done with the inspection hatch closed!

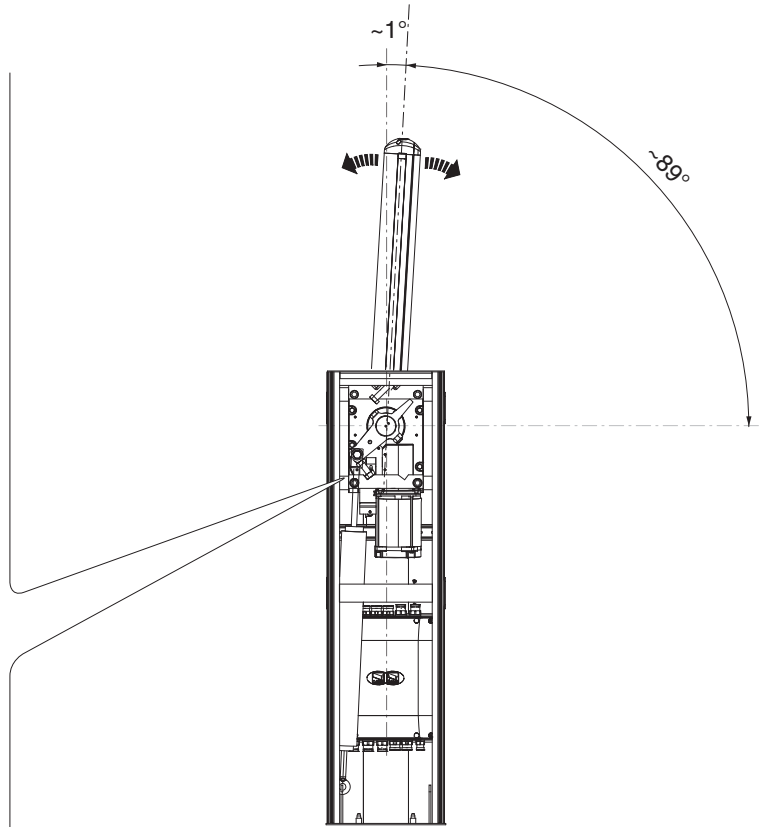
To correct the vertical position (=opening), lower the arm, open the inspection hatch and turn the mechanical stop either clockwise or counter-clockwise, then, secure the stop with the counter nut.



Opening mechanical stop

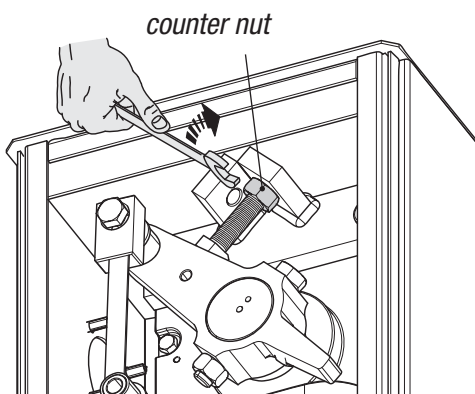
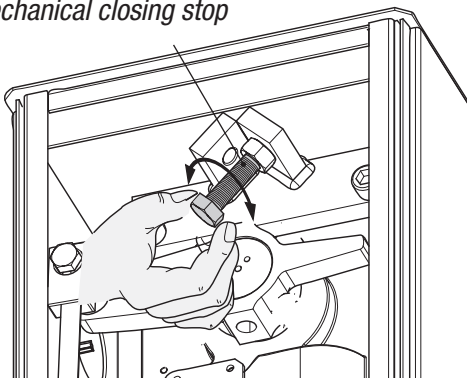


counter nut

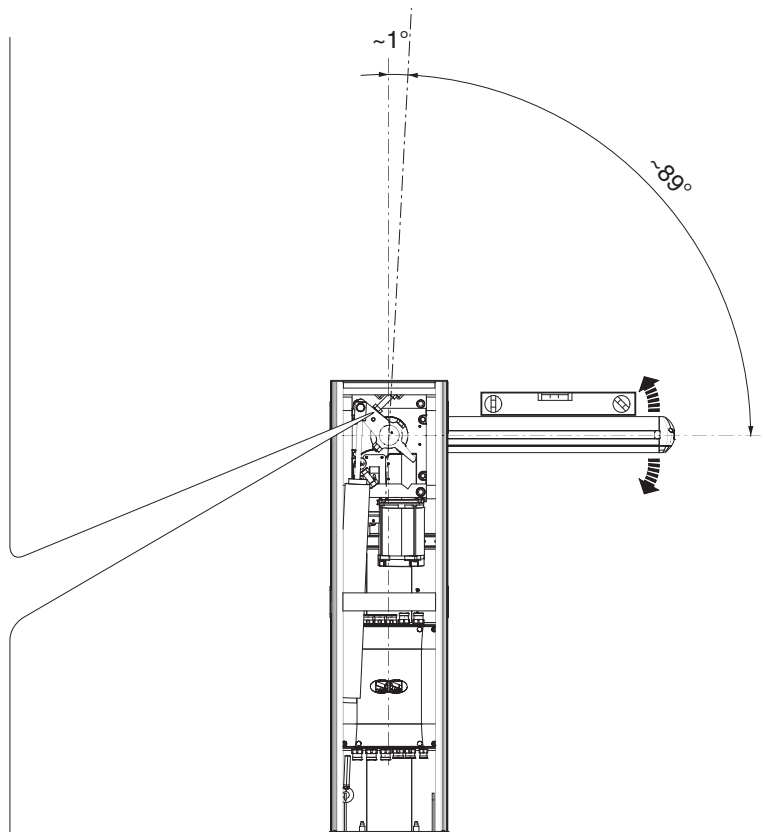


To correct the horizontal position (=closing), raise the bar, adjust the mechanical closing stop and secure it with the counter nut.

Mechanical closing stop



counter nut

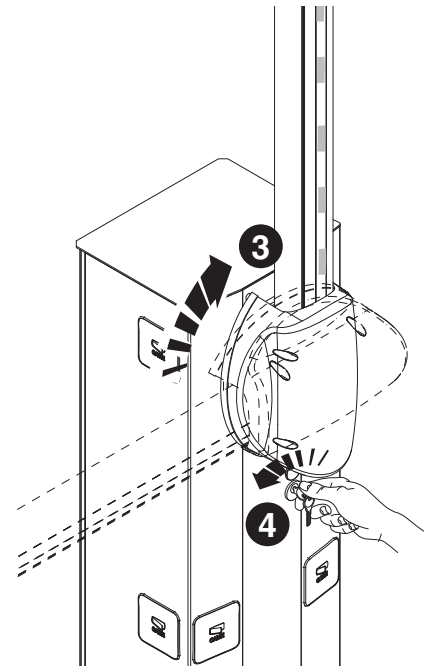
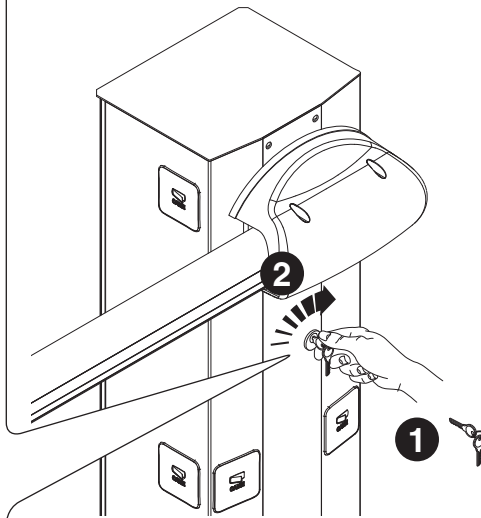


Manual release of the barrier arm

- Insert the key into the lock and turn it clockwise. Manually lift the barrier arm and re-lock it by turning the key counter-clockwise.



⚠ WARNING! The release action may result in danger for the user, when, for whatever reason - the arm is improperly fixed to the pin during mounting, the arm is broken or cracked during an accident, etc.. - the tension springs no longer provide balance! **This may result in sudden rotating movements of arm attachment and/or of the arm itself.**



Description of the control panel

Designed and made by CAME Cancelli Automatici S.p.A. The control panel is powered by 230 V AC, at 50 / 60 Hz frequency. the command devices and accessories are powered by 24V. Warning! The accessories must not exceed 40 W overall.

The control panel features an amperometric device which constantly controls the motor thrust data.

When the barrier arm runs into an obstacle, the amperometric sensor detects an overload in the thrust and acts on the movement:

- when opening: by stopping the arm;
- when closing: by inverting the direction of travel and opens entirely; the automatic closing activates.

Warning! After three consecutive inversions, the barrier arm stays open and excludes the automatic barrier: . To close press the command button or the transmitter button.

All connections are protected by quick fuses, see table.

The card handles the following functions:

- automatic closing after an opening command;
- immediate closing;
- pre-flashing of the flashing light;
- obstacle detection when barrier arm is stopped in any position;
- Slave function;

- increased braking action of the barrier arm.

Types of command:

- opening/closing;
- opening/closing with maintained action;
- opening;
- total stop.

Specific trimmers regulate:

- the working time for automatic closing;
- the sensitivity of the amperometric device;

Optional accessories:

- flashing light and luminous cord.
- warning light for barrier arm open, turns off when arm is closed;
- 002LB38 card for operation during blackouts and battery recharging (see technical documentation for cards).

⚠ Warning! Before doing any work on the control panel, cut off the main power and/or disconnect the batteries.

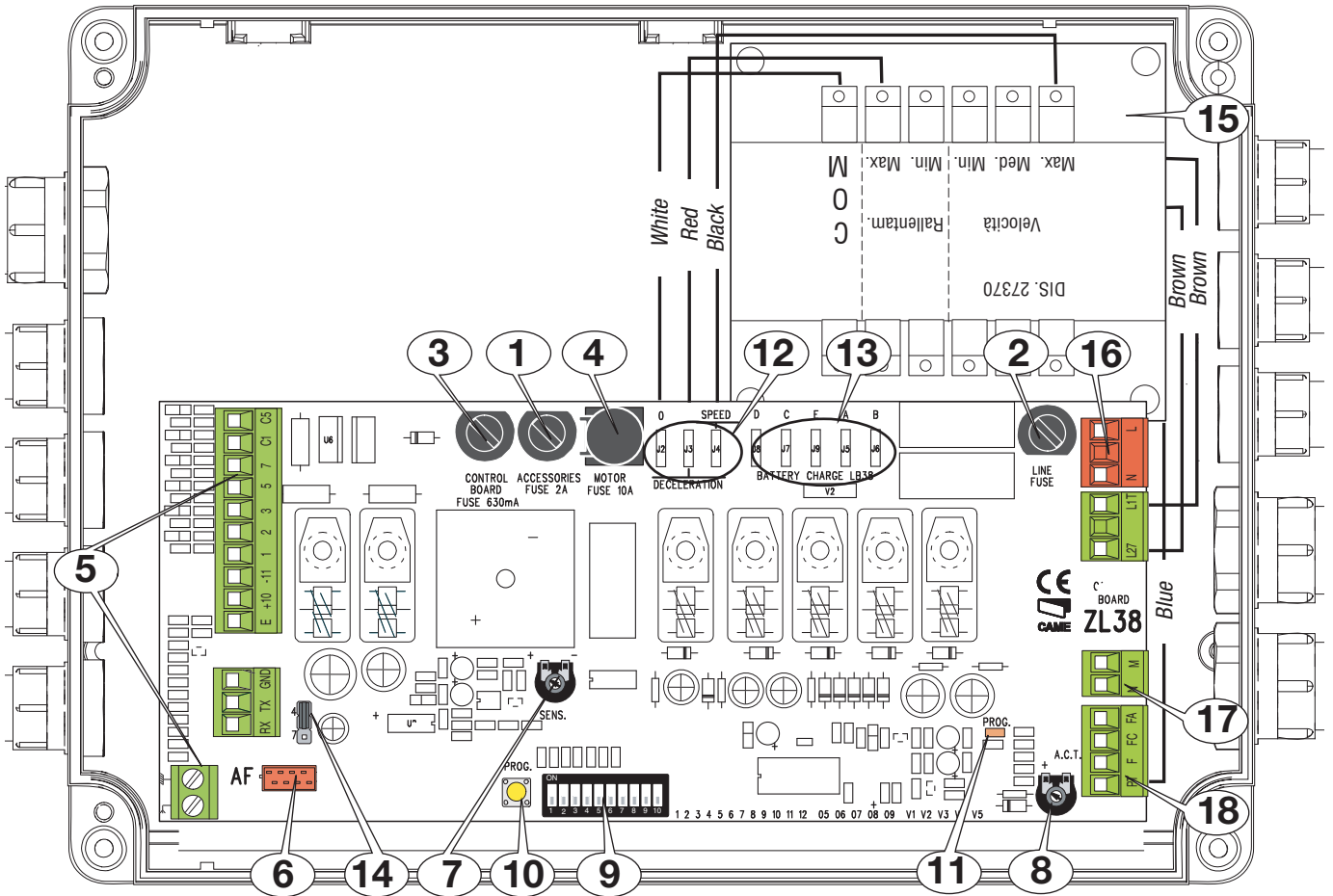
Technical data

TECHNICAL DATA	
power source	230 V - 50/60 Hz
Maximum allowed power load	400 W
power draw when idle	110 mA
maximum power for 24 V accessories	40 W
circuit insulation class	II
container material	ABS
container protection rating	IP54
working temperature	-20 / +55°C

FUSE TABLE	
to protect:	fuses for:
Electronic card (line)	3.15 A-F
24 V Accessories	2 A-F
Command devices (control panel)	630 mA-F
Motor	10 A-F

Main component parts

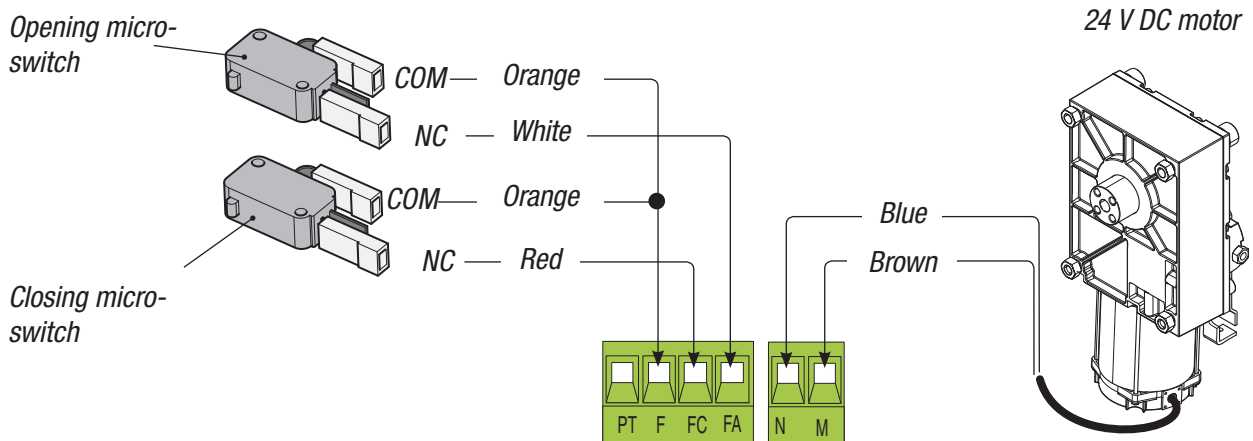
- | | |
|---|---|
| 1 - Accessories fuse | 11 - LED for radio code/automatic closing |
| 2 - line fuse | 12 - Connectors for speed and breaking adjustments |
| 3 - control panel fuse | 13 - Connection connectors for 13LB002 card (battery charger) |
| 4 - motor fuse | Selection jumper for command type for button on 14-2 |
| 5 - Accessories terminals | 15 - Transformer |
| 6- radiofrequency card connector | 16 - Power source terminals |
| 7 - SENS Trimmer:adjusting amperometric sensitivity | 17 - Motor terminals |
| 8 - TCA Trimmer:adjusts automatic closing time | 18 - Endpoint terminals |
| 9 - Functions selection Dip switch | |
| 10 - code memorisation button | |



Electrical connections

Gearmotor and endstops

shown is the connection of a left-hand barrier. A right-hand barrier has cables on terminals M-N.



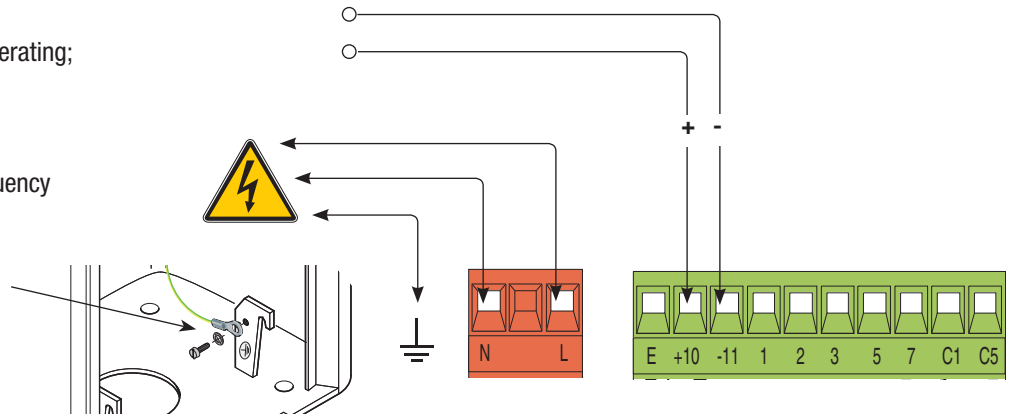
Power source and accessories

Terminals for powering accessories:

- for 24 V AC at normal operation;
 - when emergency batteries are operating;
- Overall allowed power: 40 W

230 V AC powered, 50 / 60 Hz frequency

Eyelet terminal with screw and washer for ground connection



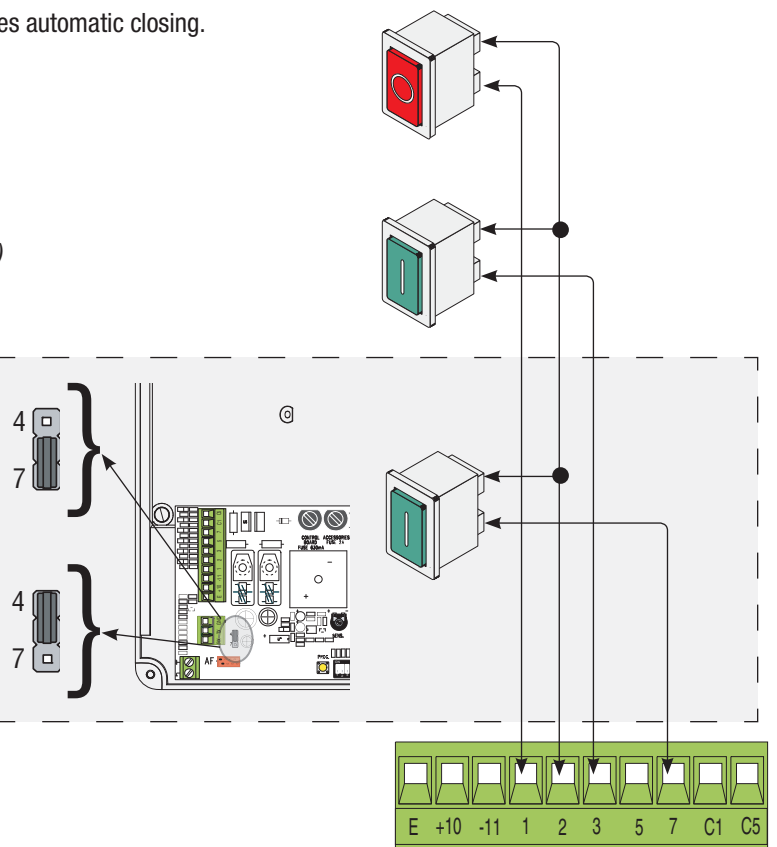
Command devices

Stop button (**NC contact**) - Button to stop barrier arm Excludes automatic closing. if unused, set Dip switch 9 to ON.

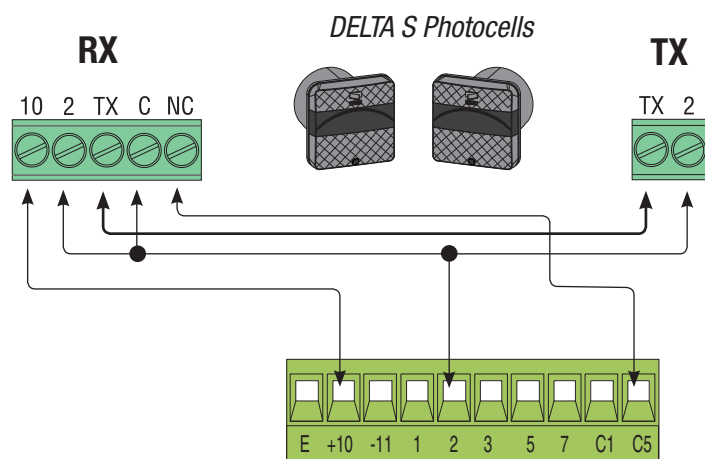
Button for commanding opening of barrier arm (**NO contact**)

Button for barrier opening and closing commands (**NO contact**) - the barrier opens or invert movement depending on what is selected on Dip-switch 2. Check position of jumper (n 14, page 15) as shown in figure.

NO contact closing button - is required in case of Maintained Action. Position jumper as shown.



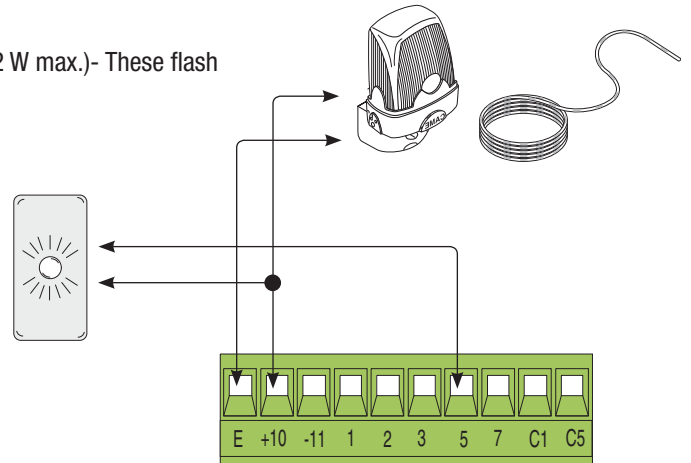
Immediate Closing (NC) Contact
Automatic closing of barrier arm after obstacle passes within operating range of safety devices.
if unused, set Dip switch 8 to ON.



Warning devices

Flashing light and luminous cord (contact voltage rating: 24 V - 32 W max.)- These flash on and off during barrier arm opening and closing.

Warning light when barrier arm is open(contact voltage rating: 24V -3W max.)
Warns that the barrier arm is open.

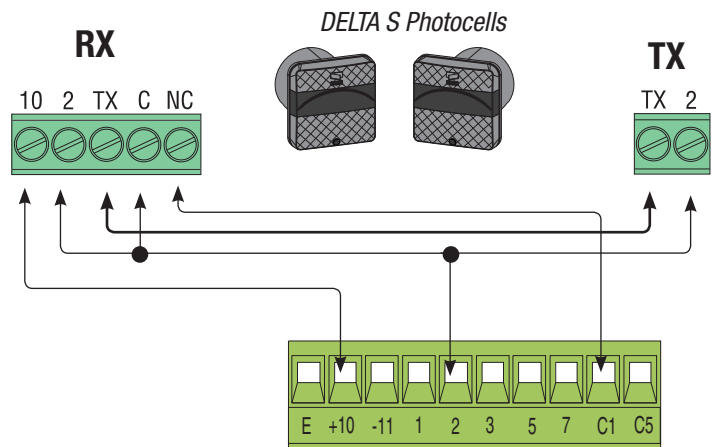


Safety devices

Reopen during closing (NC) Contact

Input for safety devices like photocells, compliant with law EN 12978. When the barrier arm is closing, opening the contact causes inversion of movement.

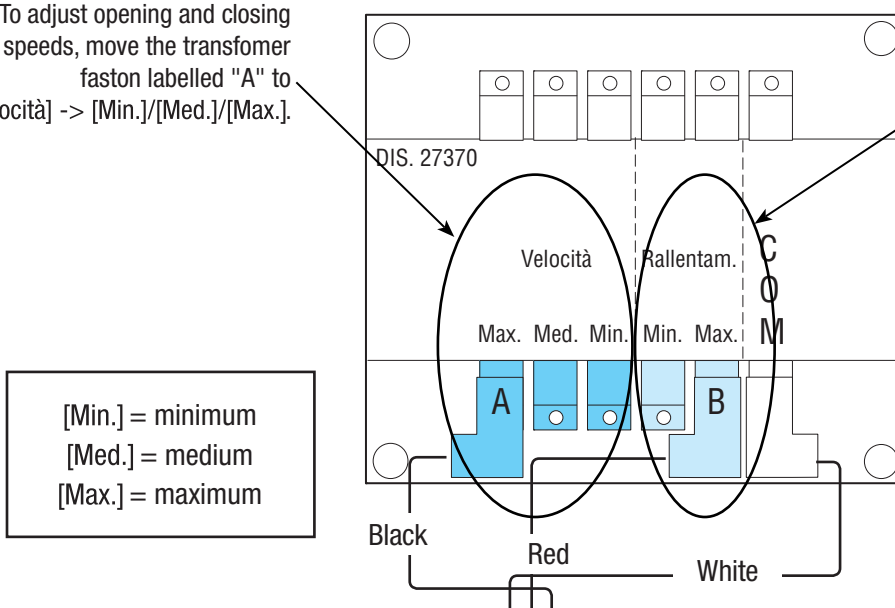
if unused, short-circuit contact 2-C1.



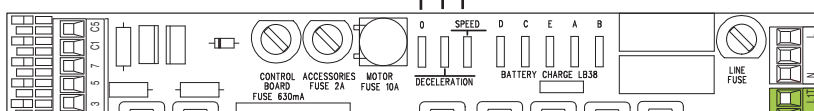
Adjusting manouvring and braking speeds

To adjust opening and closing speeds, move the transformer faston labelled "A" to [Velocità] -> [Min.]/[Med.]/[Max.].

to adjust braking actions , move the "B" faston" to [Rallentam.] -> [Min.]/[Max.].



[Min.] = minimum
[Med.] = medium
[Max.] = maximum

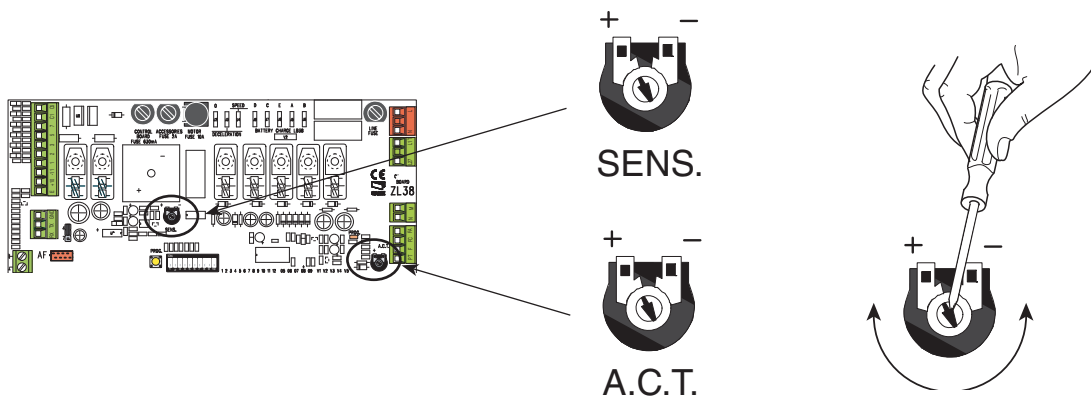


Selecting functions



- 1 ON - **Automatic closing** - The automatic closing timer activates upon full opening. The preset time is adjustable, but is nevertheless subject to any intervention from the safety devices and is not activated after a Total Stop or in case of blackouts (1 OFF -deactivated);
- 2 OFF - **APre-Closes**with button (2-7) and/or transmitter (requires radio frequency card).
- 2 ON - **Openonly** with button (2-7) and/or transmitter (requires radio frequency card).
- 3 ON - 24 V output on contact (10-E) barrier arm in movement and in closed position;
- 3 OFF- 24 V output on contact (10-E) barrier arm in movement;
- 4 ON - **Maintained action** - the barrier works by keeping the button pressed, a button 2-3 for opening, a button 2-7 for closing (position jumper n. 14 as shown in figure 16).
- 5 ON - **Pre-flashing when opening and closing**- After either an opening or closing command, the flashing light and/or luminous cord conencted on [10-E], flash/es for 5 secodns before cycle start.
- 6 ON - **Obstacle detection** - With motor idle (barrier arm closed, open or after a total stop command), it prevents any movement if the safety devices (e.g. photocells) detect an obstacle.
- 7 ON - **Slave function** - To be activated when having two combined barriers (*see Connecting two combined barriers paragraph*;
- 8 OFF - **Immediate closing** - Immediately closes the barrier after vehicle has passed within the oeprating range of the safety devices. Insert safety device on [2-C5];if unused, set DIP switch to ON.
- 9 OFF - **Total stop** - Barrier arm stop and exlusion of automatic closing; to resume movement pres command button or trasmitter key. Connect button on [1-2]; if unused, set DIP switch to ON.
- 10 ON - **Braking action** - Increase braking action of the closing barrier arm (10 OFF - deactivated)

Adjustments



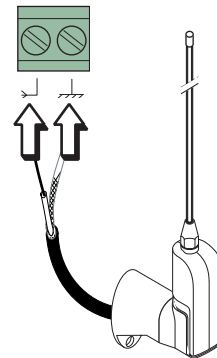
LIST OF ADJUSTMENT TRIMMERS:

- **A.C.T.** Adjusts opening waiting time. Once this time has elapsed, the barrier closes automatically.The waiting time can be adjusted to between 1 and 120 seconds..
- **SENS** Adustes the amperometric sensitivity which controls the force developed by the motor during movement; if the force exceeds the adjusted level, the system intervenes and inverts the direction of travel.

Activating the radio command

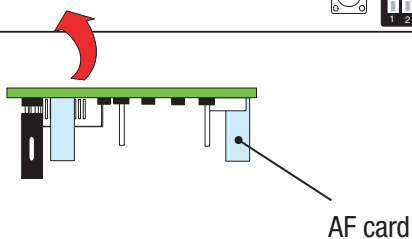
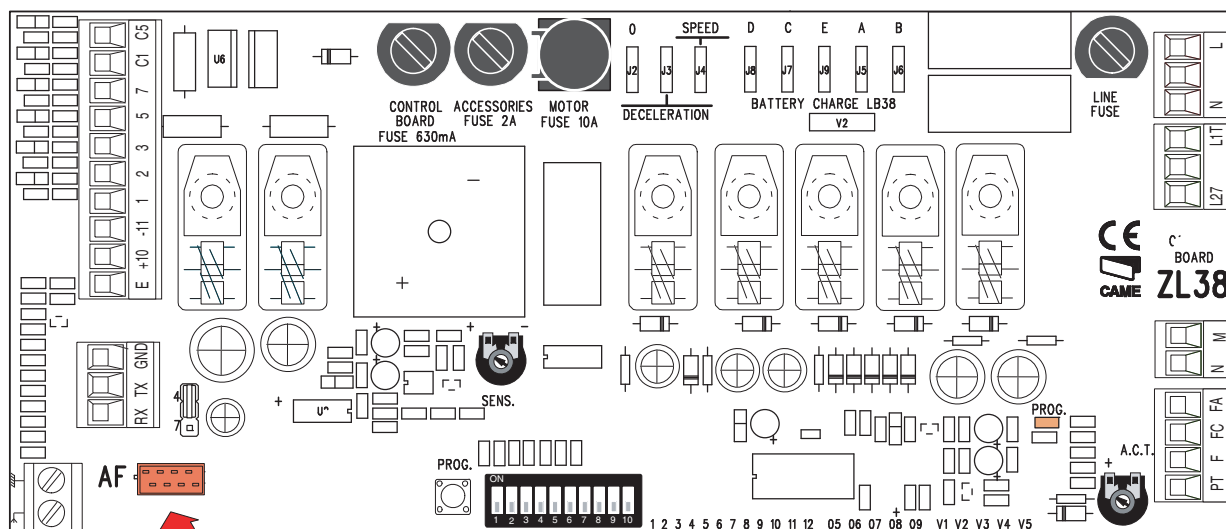
Antenna

Connect RG58 antenna cable to the apposite terminals.



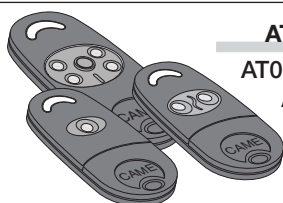
Radiofrequency card

Cut off main power and and/or disconnet batteries and insert the radiofrequency card.
 N.B.: The electronic card recognises the radiofrequency card only when it is powered up.



Frequency-MHz	radio frequency card	Series transmitters
FM 26.995	AF130	TFM
FM 30.900	AF150	TFM
AM 26.995	AF26	TOP
AM 30.900	AF30	TOP
AM 40.685	AF40	TOUCH
AM 433.92	AF43S / AF43SM	TAM / TOP
	AF43SR	ATOMO
	AF43S / AF43TW	TWIN
AM 868.35	AF868	TOP

Transmitters

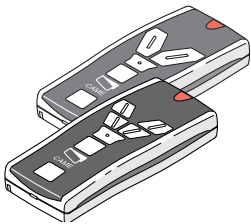


ATOMO
 AT01 • AT02
 AT04

see instructions on package

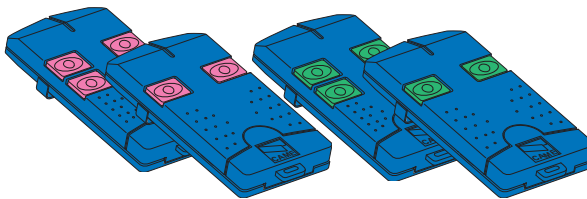
TOUCH

TCH 4024 • TCH 4048



TOP

TOP-432A • TOP-434A
TOP-302A • TOP-304A



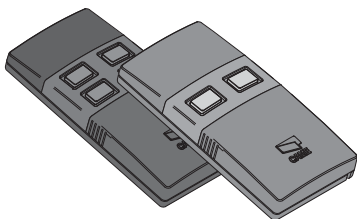
TOP

TOP-432NA • TOP-434NA
TOP-862NA • TOP-864NA
TOP-432S



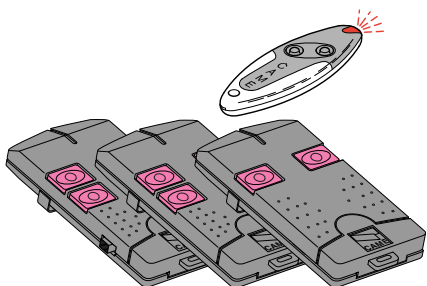
TWIN

TWIN 2 • TWIN 4



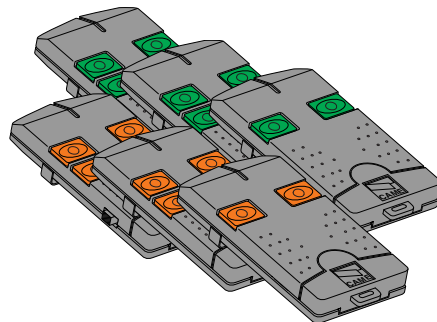
TAM

T432 • T434 • T438
TAM-432SA



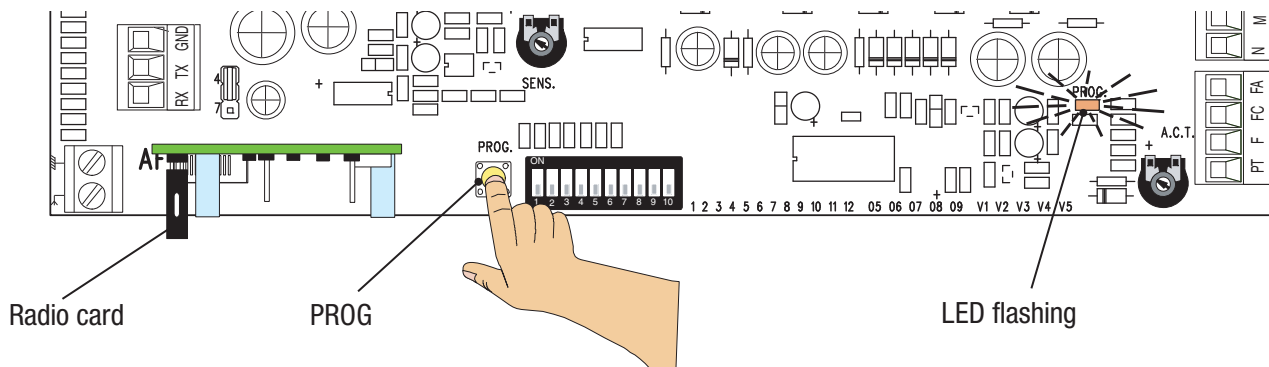
TFM

T132 • T134 • T138
T152 • T154 • T158

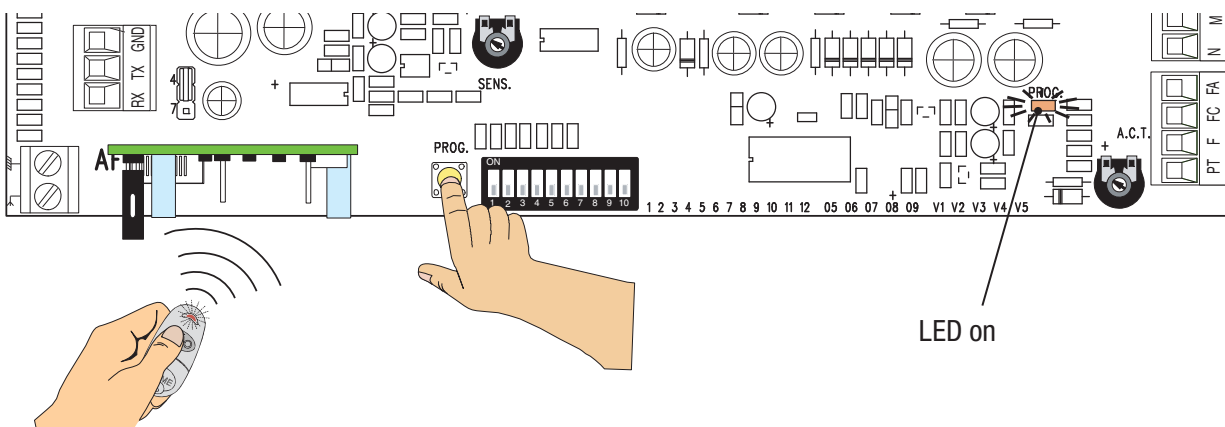


Memorisation

- Keep PROG button pressed on the electronic card. **The LED flashes ON and OFF.**

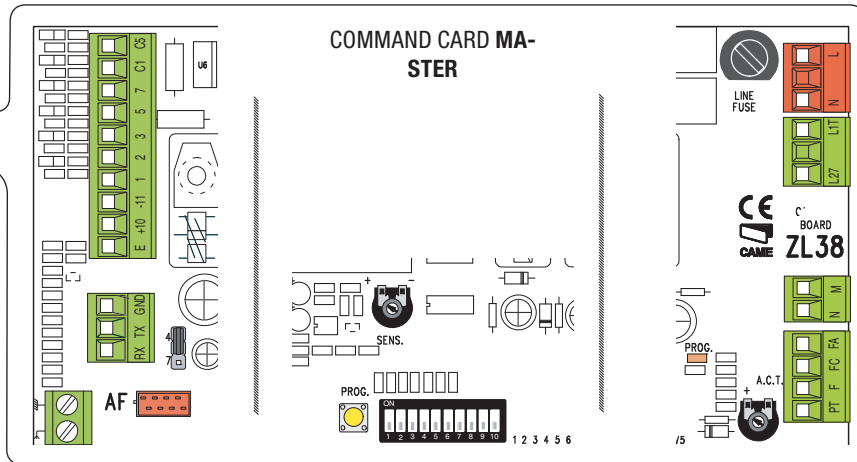
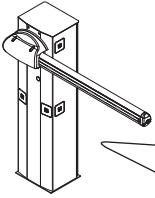
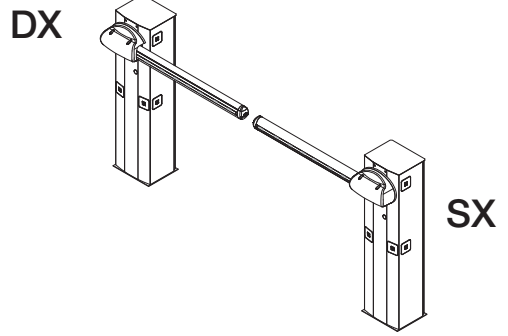


- Press the button on the transmitter to be memorised. The LED will stay ON to confirm memorisation is OK.



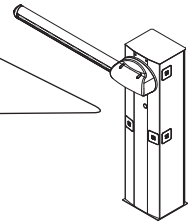
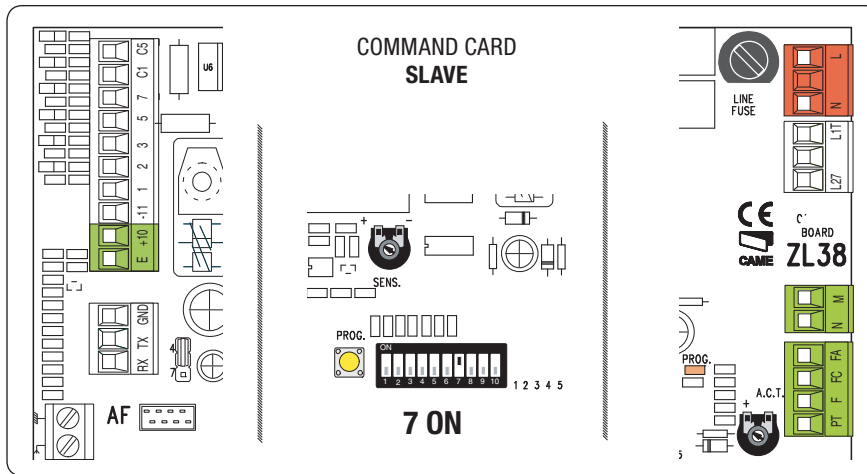
Connecting two coupled barriers

You need to determine which barrier will be the **Master** and which the **Slave** because:

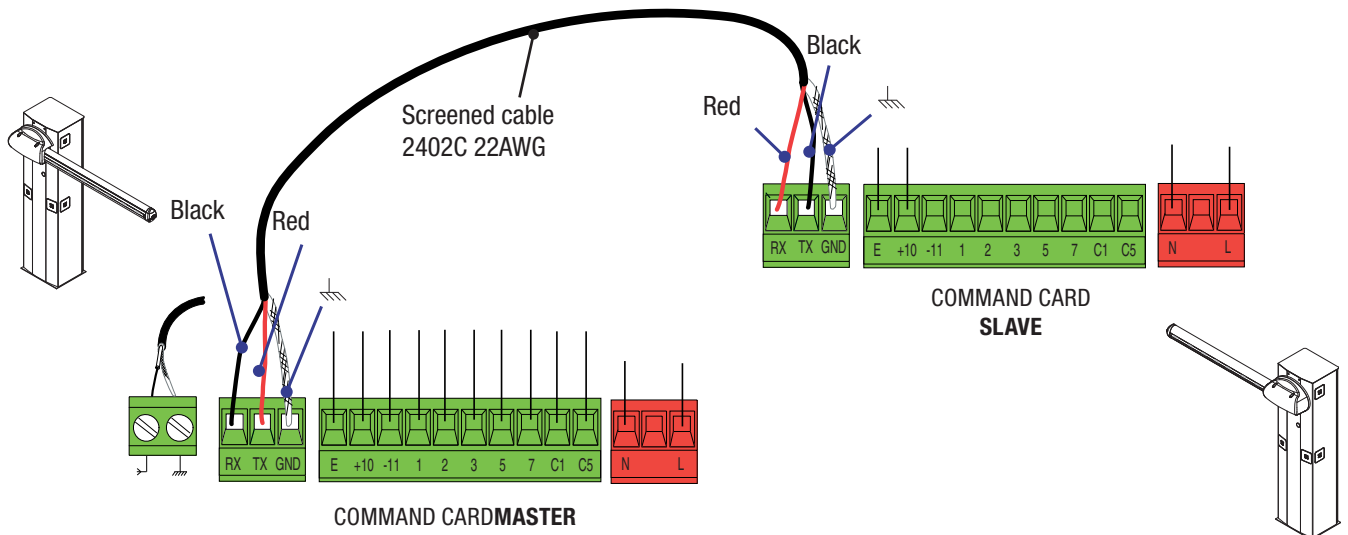


- on the **Master barrier** perform all connections, settings and adjustments needed for the installation; also, activate the remote control on this barrier.

- on the **Slave barrier** only connect the main power (terminals L-N) and any pertinent warning devices (terminals 10-E); then, set Dip-switch 7 to ON and on the transformer adjust the speed of action and deceleration to equal that of the Master barrier.



At the end, connect the two cards together using the terminals **RX-TX-GND**.



Safety instructions

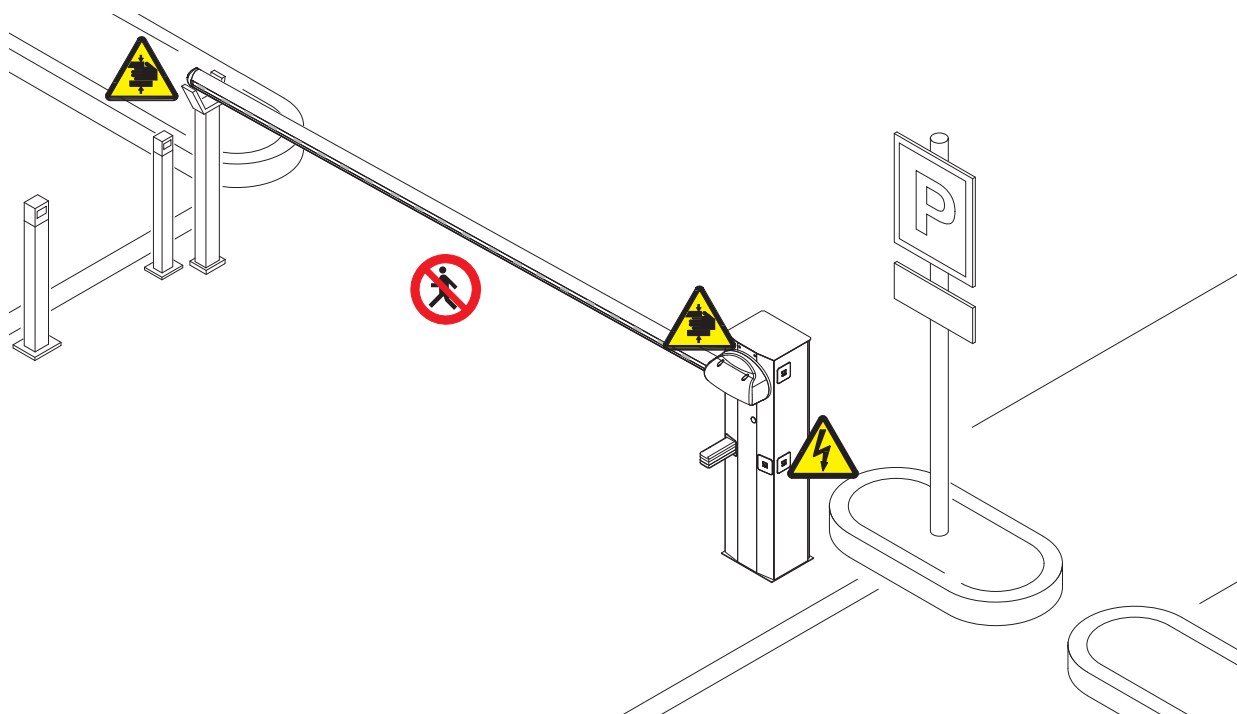
Important general safety instructions

This product is only intended to be used for the purpose it was designed. Any other use is therefore improper and dangerous. The manufacturer is not liable for any damage caused by improper, wrongful or unreasonable use.

Stay away from working mechanical parts. Stay out of the working range of the moving operator.

Do not oppose the movement of the operator as this may result in danger.

ENGLISH



Do not allow children to play or loiter within the working range of the operator. Keep transmitters and any other command devices away from children, to prevent the operator from being activated by mistake.

Immediately stop using the operator if any anomaly is manifested.



Danger of hand crushing



Danger high voltage



Transit forbidden during operation

Maintenance

Periodic maintenance

 Periodic intervention jobs **to be done by users** include wiping clean the photocell's glass front pieces, checking the proper working state of the safety devices and that operator is free of any impediments.

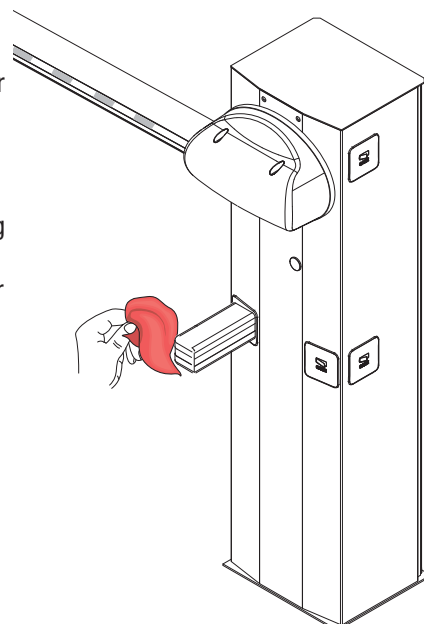
We also suggest to periodically check the state of lubrication and tightness of screws on the operator.

To check the efficiency of the safety devices, wave an object in front of the photocells during closing cycle, if the operator inverts or halts its movement, the photocells are working properly. This is the only maintenance job that can be done with the spring-tension of the barrier loaded.

Before performing any job we highly recommend to cut off the main power, to prevent any dangerous situations from possible accidental movements by the barrier.

-To wipe clean the photocell glass, use a slightly damp cloth, and do not use any solvents or other chemical products that may ruin the device.


- Check that the photocells are free of any vegetation blocking them, and that there are no obstacles to the free movement of the arm.



Periodic maintenance log to be done by users (every 6 months)

Date	Notes	Signature

Extraordinary maintenance

 The following table is used to log extraordinary maintenance, repair and improvement jobs done by the specialised external firms.
N.B. All extraordinary maintenance jobs must be carried out by skilled technicians.

Extraordinary maintenance log

Installer's stamp	Product name
	Date of job
	Technician's signature
	Customer's signature
Job carried out _____ _____ _____	


Installer's stamp	Product name
	Date of job
	Technician's signature
	Customer's signature
Job carried out _____ _____ _____	

Installer's stamp	Product name
	Date of job
	Technician's signature
	Customer's signature
Job carried out _____ _____ _____	

Trouble shooting

PROBLEM	Reference Checks	CHECKS
The operator neither opens nor closes	1-2-3-4-6-8-18	1 - Lock the inspection hatch using the key and check the release lock 2 - 2 - Deactivate the Maintained action function via Dip-switch 3 - 3 - Check power source and fuses 4 - 4 - The N.C. safety contacts are open 6 - 6 - Deactivate the master-slave function 7 - 7 - Check balancing and tightness of springs 8 - 8 - Deactivate the Obstacle detection function via Dip-switch 9 - 9 - Check opening endpoint 10 - 10 - Check closing endpoint 11 - 11 - Activate the Automatic Closing function via Dip-switch 12 - Check for the proper direction of travel 13 - Check the command devices 14 - 43 - Cut off and bring back power to card or check the TOP/TAM jumper on the AF43S card 15 -15 - Check the Arm length/Applied Accessories ratio 16 - 16 - Memorise the new radio code 18 - Adjust sensitivity 22 - Insert or duplicate the same code in all transmitters transmitters 23 - Activate the photocell via Dip-switch 24 - Connect the photocells in series and not in parallel fashion 25 - Check the batteries 26 - Respect the polarities when powering up the photocells
The operator opens but doesn't close	4-7-10	
The operator closes but doesn't open	4-7-9	
The operator does not carry out the automatic closing	11-12-13	
The transmitter doesn't work	2-14-16	
The operator inverts the direction of travel	7-18	
Only one transmitter works	22	
The photocell does not work	12-23-24	
The LED flashes quickly	4	
Il LED stays on	13	
The operator does not fully complete cycle	7	
Cannot balance the arm	7-15	
The operator does not decelerate	7-15	
The operator does not run on the emergency batteries	8-25-26	
The operator is slow when starting	7	

Dismantling and disposal

 In its premises, CAME Cancelli Automatici S.p.A. implements an Environmental Management System certified in compliance with the UNI EN ISO 14001 standard to ensure environmental protection.

Please help us to safeguard the environment. At CAME we believe this to be one of the fundamentals in its market operations and development strategies. Just follow these short disposal instructions:

DISPOSING OF THE PACKAGING

The components of the packaging (i.e. cardboard, plastic, etc.) are solid urban waste and may be disposed of without much trouble, simply by separating them for recycling.

Before proceeding it is always a good idea to check your local legislation on the matter.

DO NOT DISPOSE OF IN THE NATURE!

PRODUCT DISPOSAL

Our products are made up of various materials. Most of these (aluminium, plastic, iron, electric cables) are solid urban waste. These can be disposed of at local solid waste management dumps or recycling plants.

Other components (i.e. electronic cards, remote control batteries, etc.) may contain hazardous substances.

These must therefore be handed over to the specially authorised disposal firms.

Before proceeding it is always a good idea to check your local legislation on the matter.

DO NOT DISPOSE OF IN THE NATURE!

**Came Cancelli Automatici s.p.a.**

address Via Martiri della Libertà Street n. 15 postal code 31030
location Dosson di Casier province Treviso state Italia

DECLARES THAT THE PARTLY COMPLETED MACHINERY AUTOMATIC ROAD BARRIERS

G2080Z; G2080IZ; G2081Z;
G4040Z; G4040IZ; G4041Z;
G2500; G2500N; G2510;
G3250; G3750; G3751;
G4000C; G4000D; G4000E; G4000N; G4001; G4001E; G4010; G4011;
G6000; G6000B; G6000E; G6001; G6001E; G6010; G6011;
G6500; G6501;
G12000; G12000A; G12000S

G02040; G04060; G06080
G02801; G02803;
G03755DX; G03755SX

MEET THE APPLICABLE ESSENTIAL REQUIREMENTS

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 - 1.4.2.1 - 1.5.1 - 1.5.6 - 1.5.8 -
1.5.9 - 1.5.13 - 1.6.1 - 1.6.3 - 1.6.4 - 1.7.1 - 1.7.2 - 1.7.4

COMPLIES WITH THE PROVISIONS OF THE FOLLOWING DIRECTIVES

DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 17 May 2006 on machinery, and amending Directive 95/16/EC.

DIRECTIVE 2004/108/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility.

PERSON AUTHORISED TO COMPILE THE RELEVANT TECHNICAL DOCUMENTATION

Came Cancelli Automatici s.p.a.

address Via Martiri della Libertà Street n. 15 postal code 31030
location Dosson di Casier province Treviso state Italia

The pertinent technical documentation has been drawn up in compliance with attached document IIB
Came Cancelli Automatici S.p.A., following a duly motivated request from the national authorities, undertakes to provide
information related to the quasi machines,

and FORBIDS

commissioning of the above mentioned until such moment when the final machine into which they must be incorporated, has
been declared compliant, if pertinent, to 2006/42/CE.

Dosson di Casier (TV)
13 July 2010

Gianni Michielan
Managing Director

DDI B EN G001d ver. 4.1 21 April 2010
Translation of the Declaration in the original language

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
info@came.it - www.came.com
Cap. Soc. 1.610.000,00 € - C.F. e P.I. 03481280265 - VAT IT 03481280265 - REA TV 275359 - Reg Imp. TV 03481280265

CAMEGROUP
INNOVATION

DECLARATION OF INCORPORATION

(Annex. IIB Dir.2006/42/CE)



English - Manual Code: 119GV20 ver. 2.0 03/2011 © CAME cancelli automatici s.p.a.
The data and information in this manual may be changed at any time and without obligation on the part of CAME Cancelli Automatici S.p.a. to notify said changes.

<p>CAME France S.a. 7, Rue Des Haras Z.I. Des Hautes Patures 92737 Nanterre Cedex ☎ (+33) 1 46 13 05 05 ☎ (+33) 1 46 13 05 00</p>	FRANCE	GERMANY	<p>CAME Gmbh Seefeld Akazienstrasse, 9 16356 Seefeld Bei Berlin ☎ (+49) 33 3988390 ☎ (+49) 33 39883985</p>
<p>CAME Automatismes S.a. 3, Rue Odette Jasse 13015 Marseille ☎ (+33) 4 95 06 33 70 ☎ (+33) 4 91 60 69 05</p>	FRANCE	U.A.E.	<p>CAME Gulf Fze Office No: S10122a2o210 P.O. Box 262853 Jebel Ali Free Zone - Dubai ☎ (+971) 4 8860046 ☎ (+971) 4 8860048</p>
<p>CAME Automatismos S.a. C/Juan De Mariana, N. 17-local 28045 Madrid ☎ (+34) 91 52 85 009 ☎ (+34) 91 46 85 442</p>	SPAIN	RUSSIA	<p>CAME Rus Umc Rus Lic Ul. Otradnaya D. 2b, Str. 2, office 219 127273, Moscow ☎ (+7) 495 739 00 69 ☎ (+7) 495 739 00 69 (ext. 226)</p>
<p>CAME United Kingdom Ltd. Unit 3 Orchard Business Park Town Street, Sandiacre Nottingham - Ng10 5bp ☎ (+44) 115 9210430 ☎ (+44) 115 9210431</p>	GREAT BRITAIN	PORTUGAL	<p>CAME Portugal Ucj Portugal Unipessoal Lda Rua Liebig, nº 23 2830-141 Barreiro ☎ (+351) 21 207 39 67 ☎ (+351) 21 207 39 65</p>
<p>CAME Group Benelux S.a. Zoning Ouest 7 7860 Lessines ☎ (+32) 68 333014 ☎ (+32) 68 338019</p>	BELGIUM	INDIA	<p>CAME India Automation Solutions Pvt. Ltd A - 10, Green Park 110016 - New Delhi ☎ (+91) 11 64640255/256 ☎ (+91) 2678 3510</p>
<p>CAME Americas Automation Llc 11345 NW 122nd St. Medley, FL 33178 ☎ (+1) 305 433 3307 ☎ (+1) 305 396 3331</p>	U.S.A	ASIA	<p>CAME Asia Pacific 60 Alexandra Terrace #09-09 Block C, The ComTech 118 502 Singapore ☎ (+65) 6275 8426 ☎ (+65) 6275 5451</p>
<p>CAME Gmbh Kornwestheimer Str. 37 70825 Korntal Munchingen Bei Stuttgart ☎ (+49) 71 5037830 ☎ (+49) 71 50378383</p>	GERMANY		

<p>CAME Cancelli Automatici S.p.a. Via Martiri Della Libertà, 15 31030 Dosson Di Casier (Tv) ☎ (+39) 0422 4940 ☎ (+39) 0422 4941 Informazioni Commerciali 800 848095</p>	ITALY	ITALY	<p>CAME Sud s.r.l. Via F. Imperato, 198 Centro Mercato 2, Lotto A/7 80146 Napoli ☎ (+39) 081 7524455 ☎ (+39) 081 7529190</p>
<p>CAME Service Italia S.r.l. Via Della Pace, 28 31030 Dosson Di Casier (Tv) ☎ (+39) 0422 383532 ☎ (+39) 0422 490044 Assistenza Tecnica 800 295830</p>	ITALY	ITALY	<p>CAME Global Utilities s.r.l. Via E. Fermi, 31 20060 Gessate (Mi) ☎ (+39) 02 95380366 ☎ (+39) 02 95380224</p>

