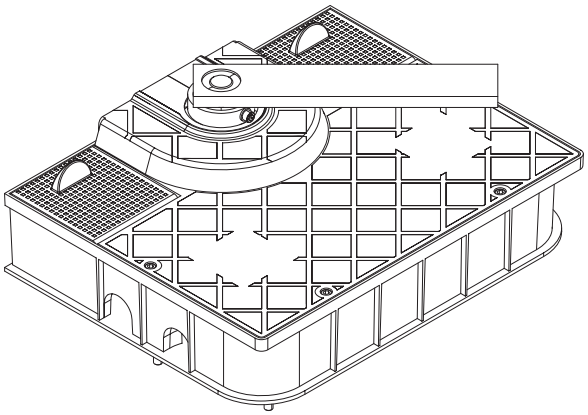
CAME
CANCELLI AUTOMATICI

CE

IN-GROUND OPERATOR FOR SWING GATES

FROG SERIES



INSTALLATION MANUAL

FROG J

"IMPORTANT INSTALLATION, SAFETY INSTRUCTIONS"

"CAUTION: IMPROPER INSTALLATION MAY CAUSE SERIOUS DAMAGE, FOLLOW ALL INSTALLATION INSTRUCTIONS CAREFULLY"

"THIS MANUAL IS ONLY FOR PROFESSIONAL OR QUALIFIED INSTALLERS"

1 Legend of symbols

This symbol tells you to read the section with particular care.

This symbol tells you that the sections concern safety issues.

This symbol tells you what to say to the end-users.

2 Intended use and application

2.1 Intended use

The FROG-J operator is designed to automate swing gates used in residential or condominium settings.

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

2.2 Application

For intensive use and condominiums: max weight of the gate 200kg, and max length 1.8m.

3 Reference Standards

The company: CAME Cancelli Automatici s.p.a. is ISO 9001:2000 quality certified; is has also obtained the ISO 14001 environmental safeguarding certification. Came engineers and manufactures all of its products in Italy.
This product complies with the following standards: EN 12978, UNI EN 954-1, CEI EN 60335-1, UNI EN 12453.

4 Description

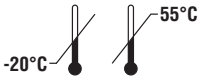
4.1 Gate Operator

This product is engineered and manufactured by CAME cancelli automatici s.p.a. and complies with current safety regulations. Guaranteed 24 months if not tampered with.
The main component parts of the operator are a foundation casing, a release group, a gearmotor and a transmission arm.
The foundation casing is made of 1.5 mm thick ABS plastic on the sides and of 4mm galvanised steel on the bottom plate. Inside is housed the release group with custom key for manually releasing the operator. The gearmotor, is made of cast aluminium in which works an irreversible, gear-ratio and, endless screw and helical crown system.

4.2 Technical features

FROG J

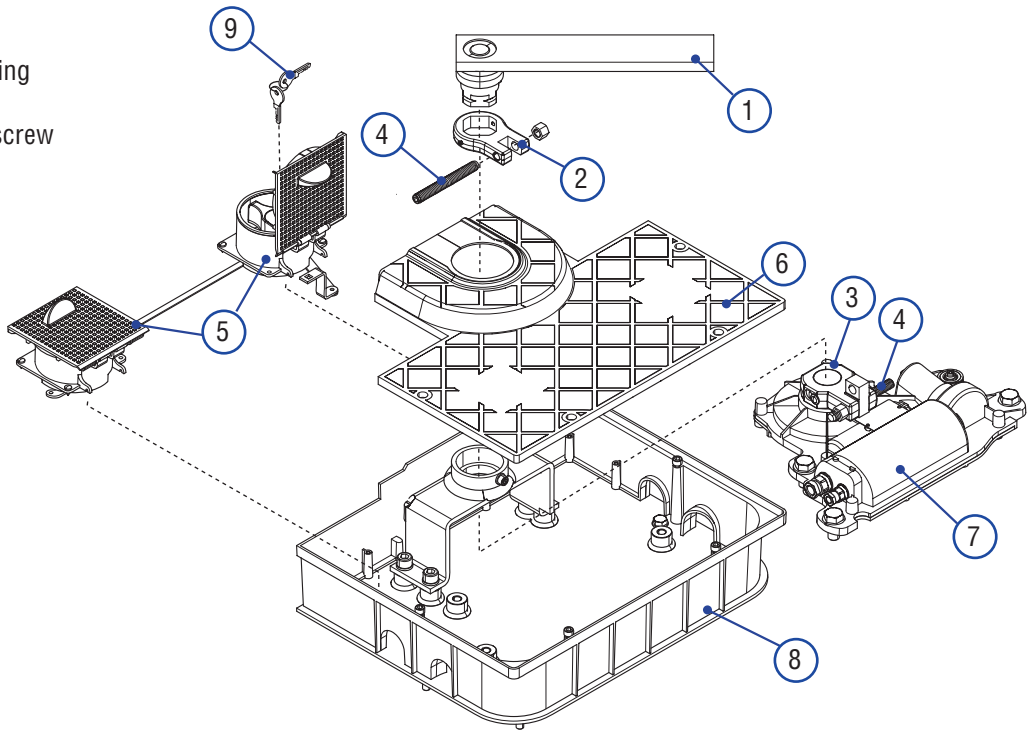
Control board power supply: 230 A.C. 50/60Hz
Motor power supply: 24V D.C. 50/60Hz
Max draw: 10 A
Nominal voltage: 240W
Max Torque.: 260N
Opening time (90°): 15 s
Gear ratio: 1/1396,5
Duty cycle: Intensive use
Protection Rating: IP67
Weight: .. kg
Insulation rating:



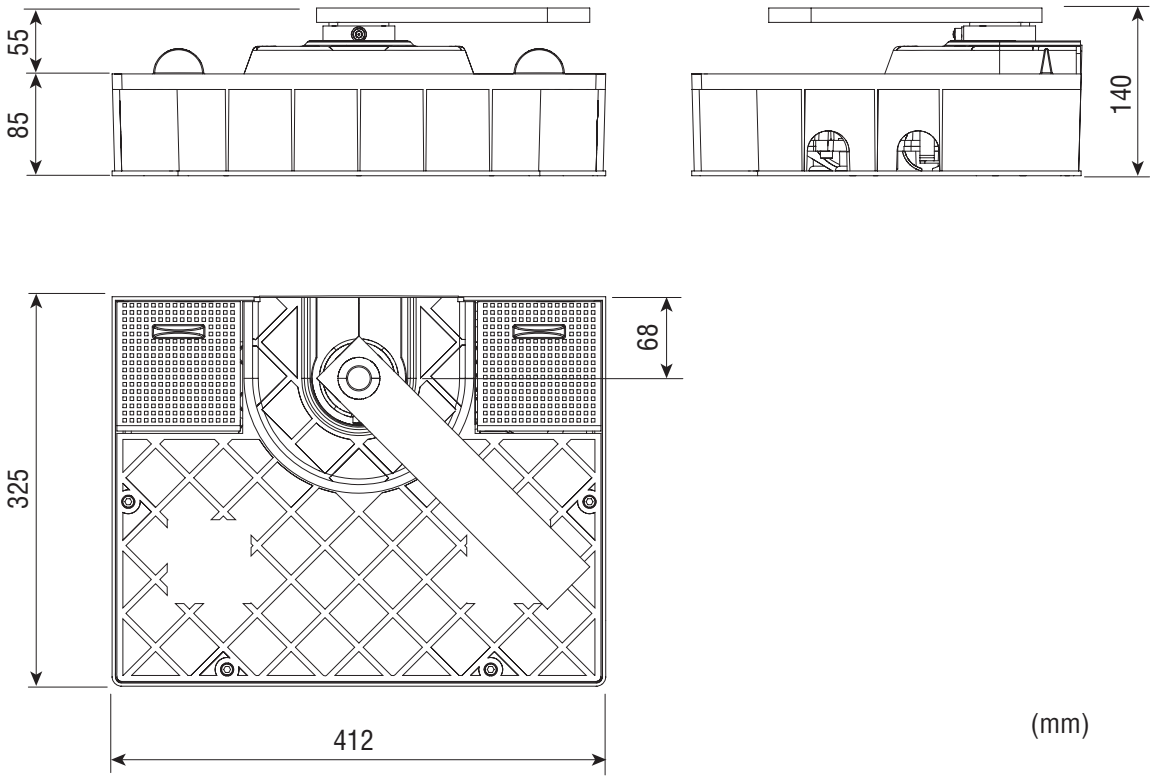
4.3 Description of parts

FROG J OPERATO

1) Gate pin-housing ring
2) Gearmotor pin-housing ring
3) Gearmotor mobile ring
4) Endstop adjustment set screw
5) Release group
6) Cover
7) Operator
8) In-ground case
9) Custom key for release group



4.4 Dimensions



(mm)

5 Installation

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

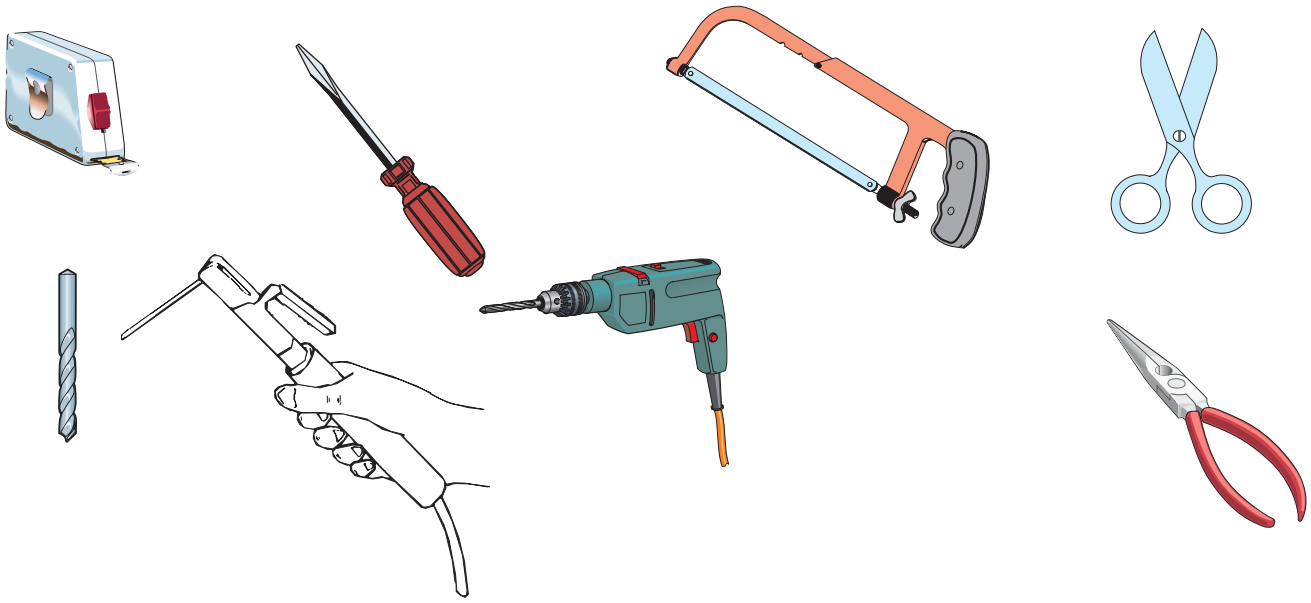
5.1 Preliminary checks

⚠ Before installing, do the following:

- Make sure you have a suitable omnipolar cut-off device with contacts more than 3 mm apart, and independent (sectioned off) power supply.
- Make sure you have suitable tubing and conduits for the electrical cables to pass through and be protected against mechanical damage.
- Fit tubing to drain away any water leaks which may cause oxidation.
- ⏚ Make sure that any connections inside the case (that provide continuance to the protective circuit) be fitted with extra insulation as compared to the other conductive parts inside;
- Make sure the structure of the gate is sturdy, the hinges work and that the is no friction between moving and non-moving parts.
- Make sure there is a mechanical stop for opening and closing.

5.2 Tools and materials

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



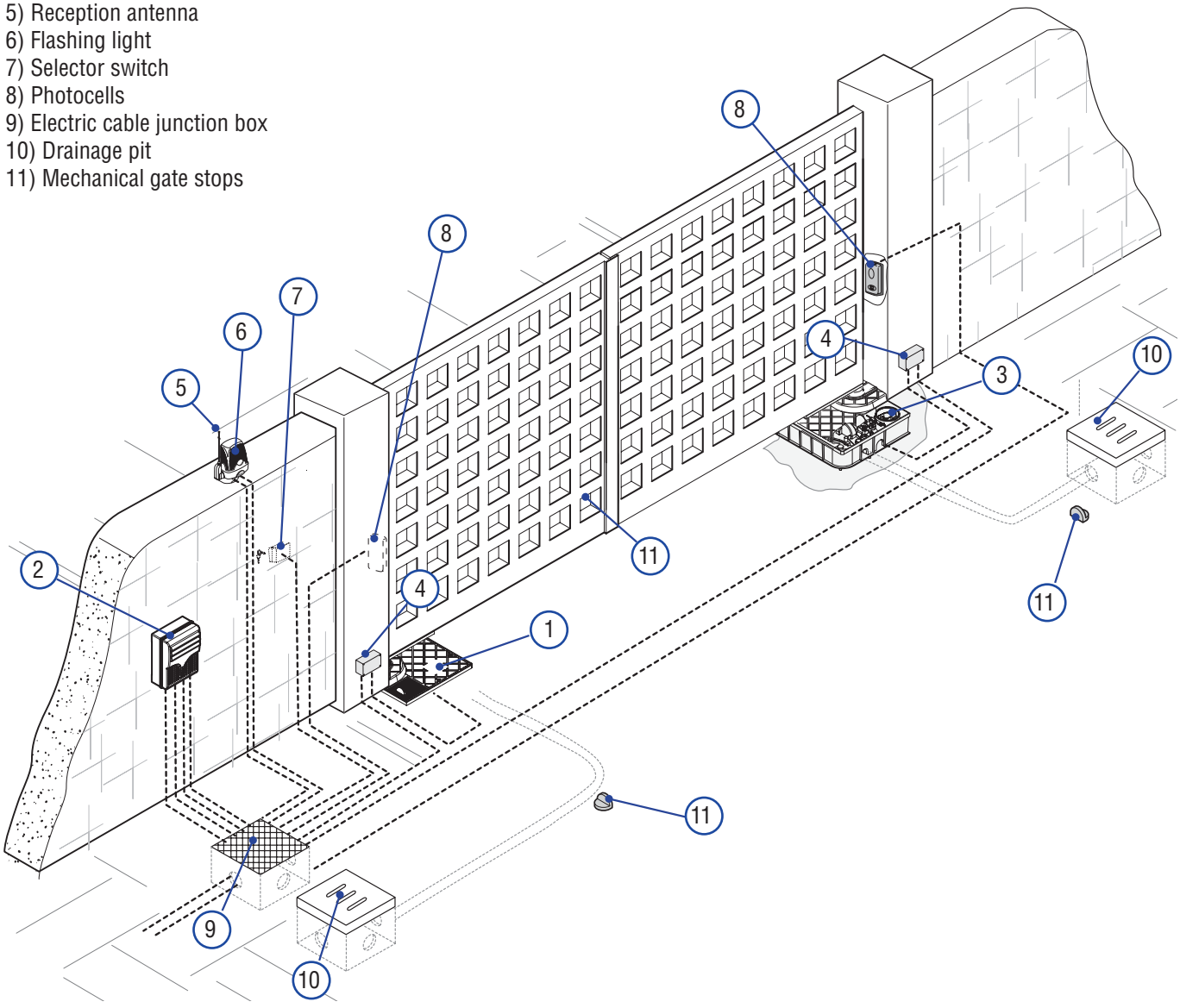
5.3 Cable list and minimum thickness

Connections	Type of cable	Length of cable 1 < 10 m	L. of cable 10 < 20 m	L. of cable 20 < 30 m
Control panel power supply 230 3F	FROR CEI 20-22 CEI EN 50267-2-1	3G x 1,5 mm^2	3G x 2,5 mm^2	3G x 4 mm^2
Motor power supply 24V		3 x 1 mm^2	3 x 1,5 mm^2	3 x 2,5 mm^2
flashing lamp		2 x 0,5 mm^2	2 x 1 mm^2	2 x 1,5 mm^2
Photocell transmitters		2 x 0,5 mm^2	2 x 0.5 mm^2	2 x 0,5 mm^2
Photocell receivers		4 x 0,5 mm^2	4 x 0,5 mm^2	4 x 0,5 mm^2
Accessories power supply		2 x 0,5 mm^2	2 x 0,5 mm^2	2 x 1 mm^2
Control and safety devices		2 x 0,5 mm^2	2 x 0,5 mm^2	2 x 0,5 mm^2
Antenna connection	RG58	max. 10 m		

N.B.: If the cable length differs from that specified in the table, then you must determine the proper cable diameter in the basis of the actual power draw by the connected devices and depending on the standards specified in CEI EN 60204-1.
For connections that require several, sequential loads, the sizes given on the table must be re-evaluated based on actual power draw and distances.When connecting products that are not specified in this manual, please follow the documentation provided with said products.

5.4 Standard installation

1) FROG-J unit
2) Control panel
3) Custom key release
4) Shunt box for connecting the gearmotor
5) Reception antenna
6) Flashing light
7) Selector switch
8) Photocells
9) Electric cable junction box
10) Drainage pit
11) Mechanical gate stops

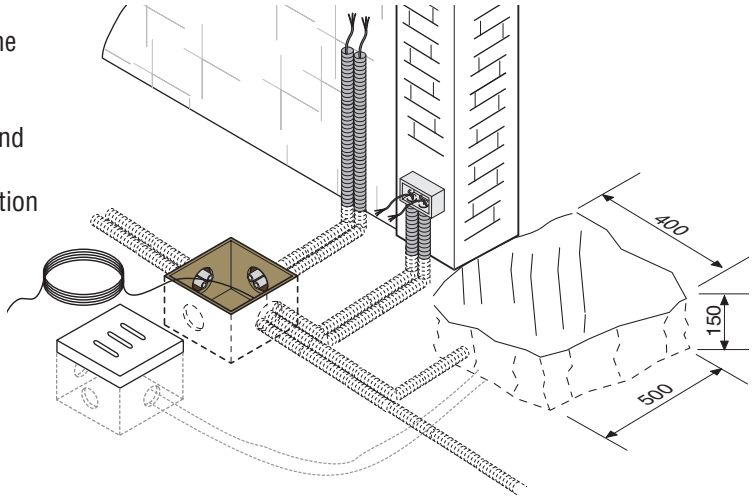


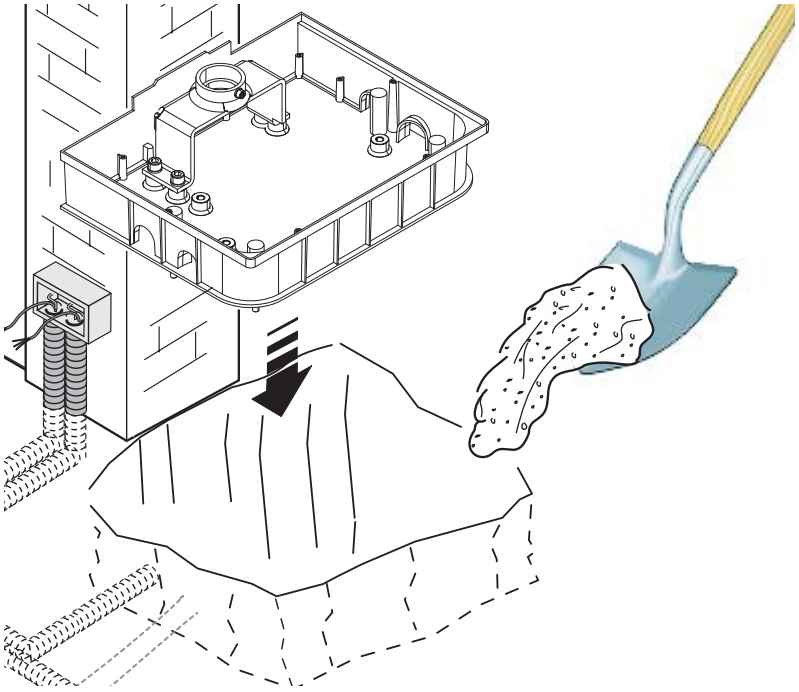
5.5 Preparing for the foundation casing

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

N.B: illustration view: left side, inside view.

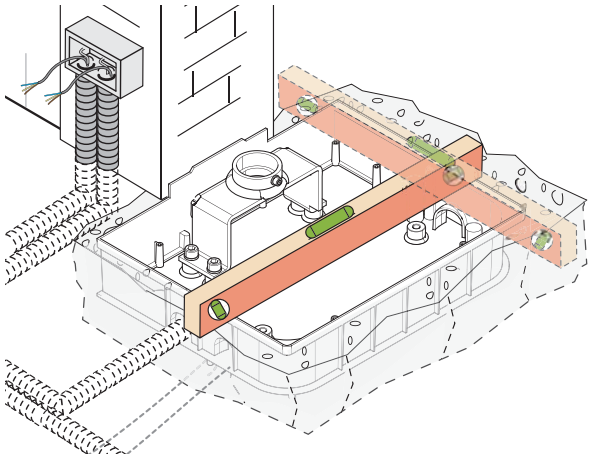
- To facilitate insertion of the in-ground casing, remove the gate and lower hinges. Dig a pit to house the foundation casing, set up the shunt boxes and corrugated plastic conduits for connections coming from the junction box and the drainage tube.
N.B.: the number of tubes depends on the type of installation and accessories it will support.

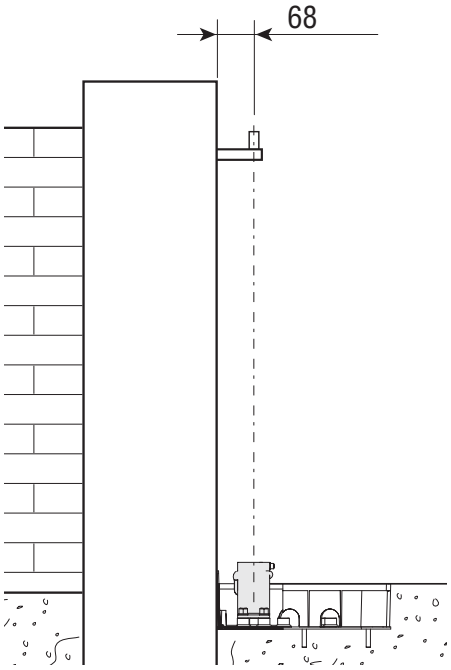




- Fill the pit with cement and sink the foundation casing, while making sure that the corrugated plastic tubes and drainage tubes pass through their apposite holes.

- Level the foundation casing with the ground and position the its stuffing box so that it is perfectly aligned with the gate's top hinge.
Leave to set for at least 24 hours.

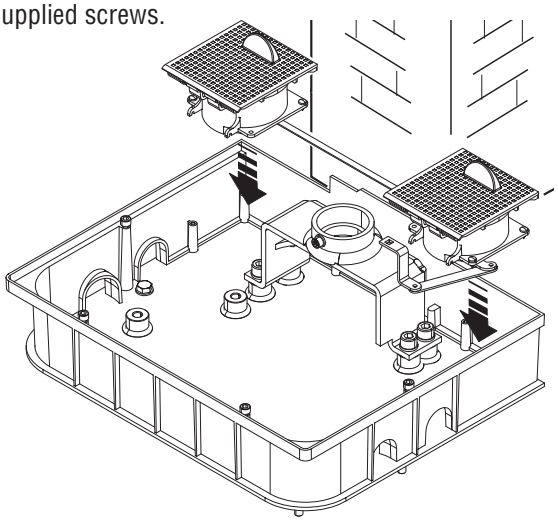


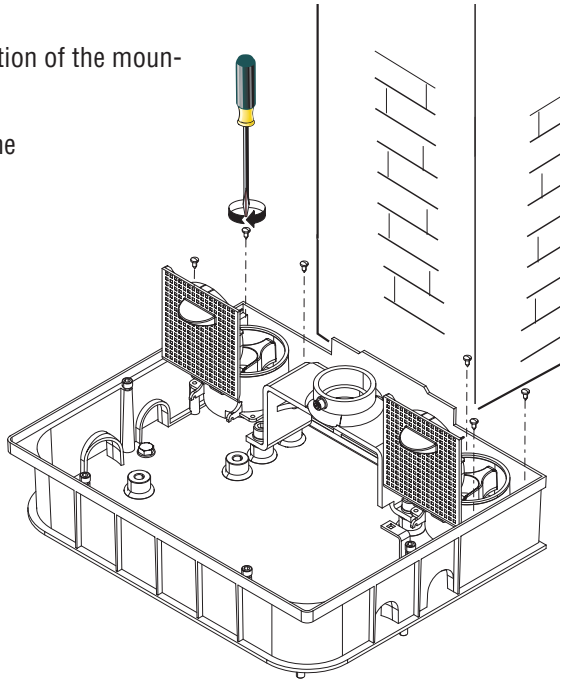


5.6 Installing the unit

N.B.: view of illustrations: outer side (to simplify the description of the mounting phases)

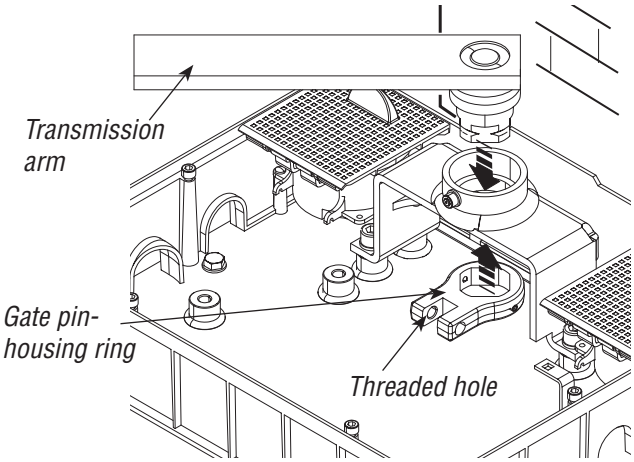
- Insert the releases into the in-ground box and anchor them using the supplied screws.

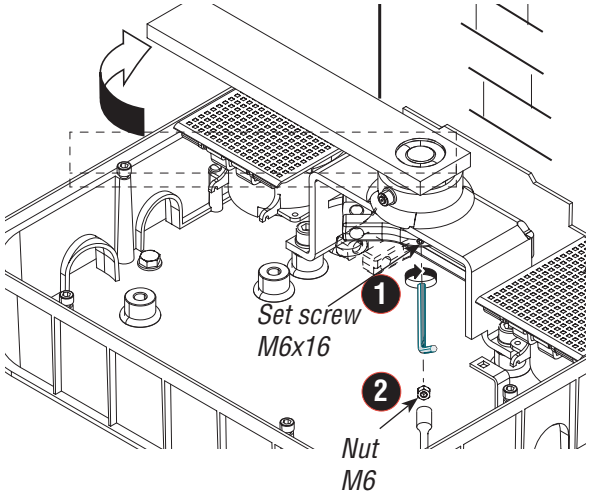




- Assemble the transmission arm with the pin-housing ring to the stuffing box, anchor them using the (M6x16) set screws and nuts.

*Warning: the threaded holes for inserting the (m10x90) adjustment set screw of the gate pin-housing ring is to be positioned opposite the threaded hole of the gearmotor pin-housing ring.*posizionato dalla parte opposta al foro filettato del braccio mobile del motoriduttore.





Note: for the right side gearmotor, assemble the gate pin with the pin-housing ring so that is symmetrical to the left side one, see illustration.

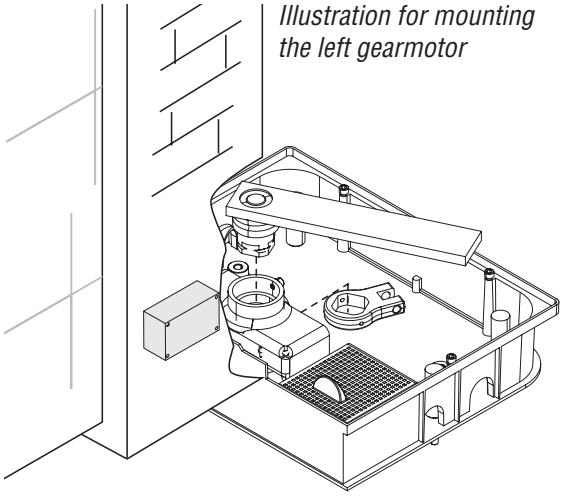


Illustration for mounting the left gearmotor

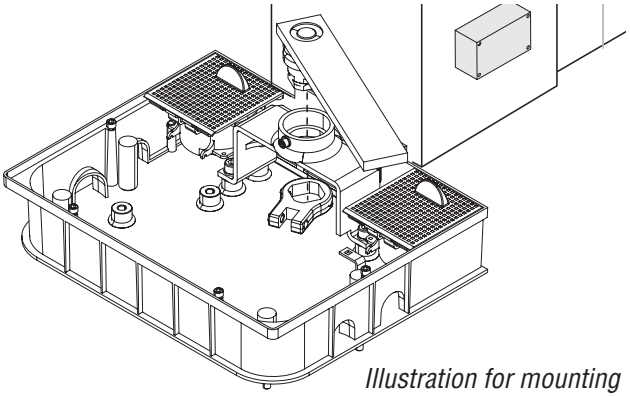
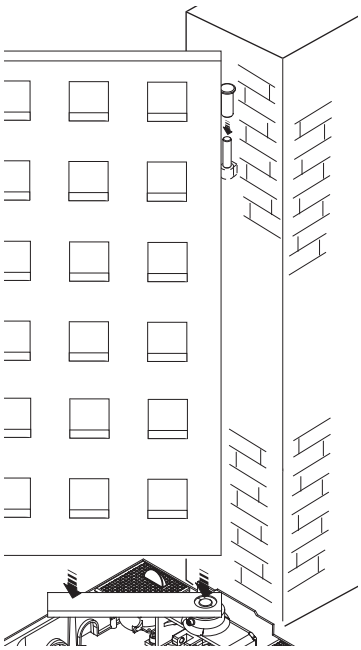
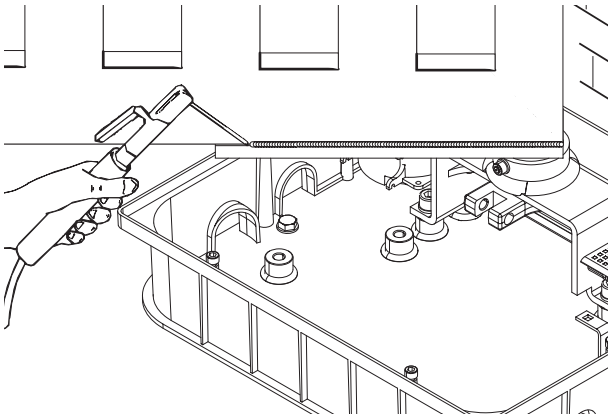


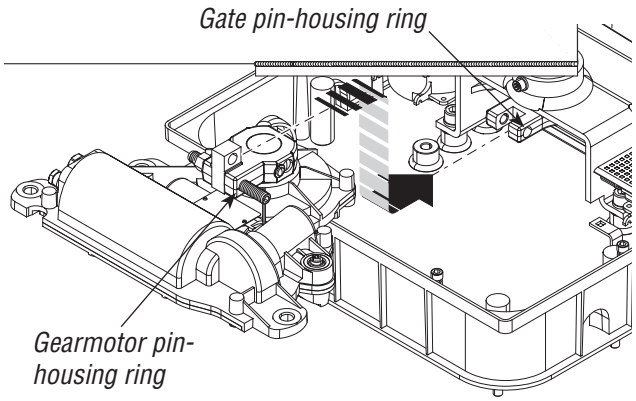
Illustration for mounting the right gearmotor

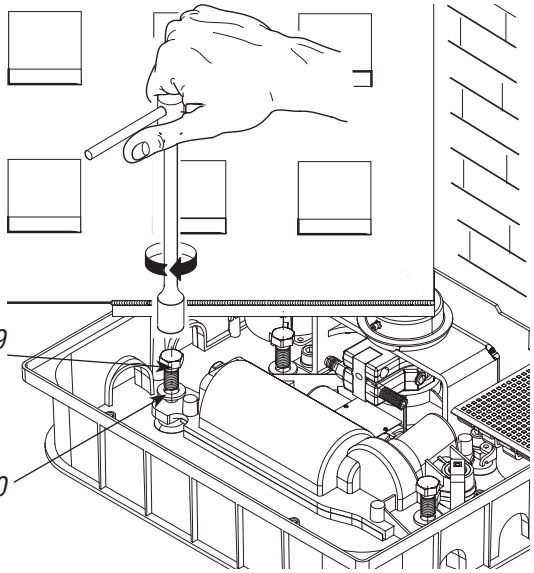


- Mount the gate leaf by only inserting the top hinge. Check that the gate leaf opens and closes easily. Bolt into place using the proper bolts or carefully weld the gate leaf to the transmission arm.

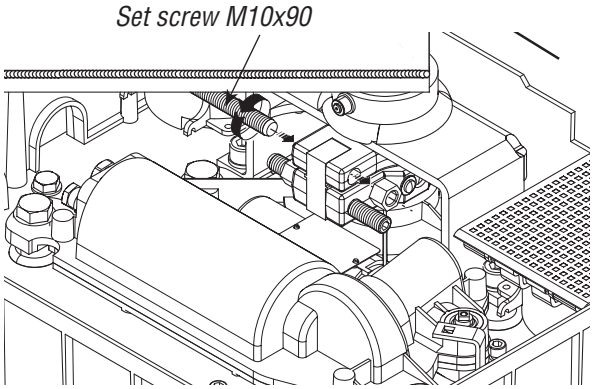


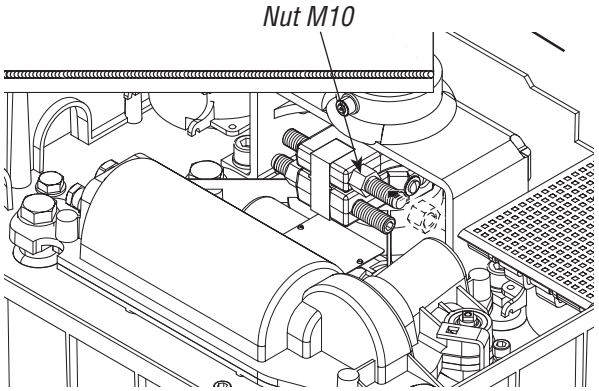
- Insert the gearmotor into the in-ground box and anchor it using bolts and washers.
N.B.: Place the gearmotor's pin-housing ring exactly below that of the gate pin and facing the same direction.



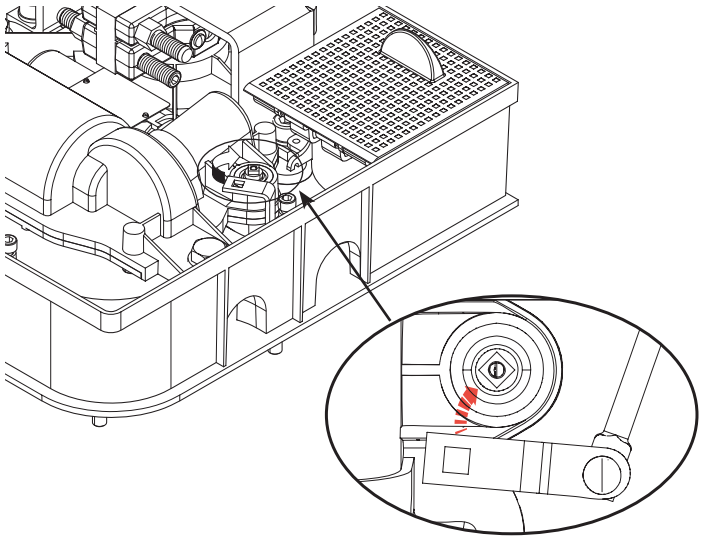


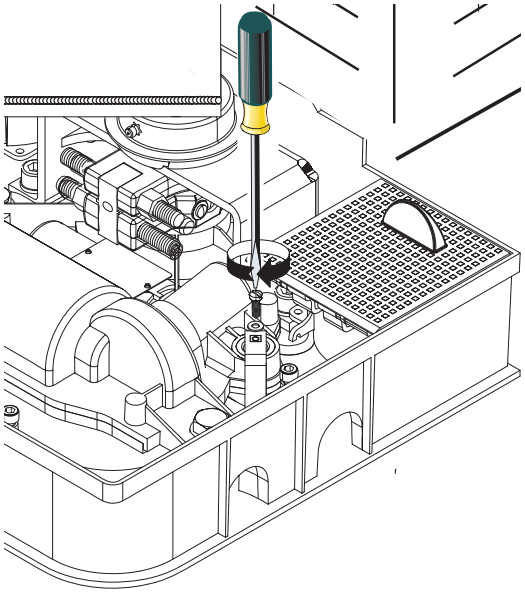
- Attach the gearmotor to the gate pin-housing ring. Turn the adjustment set screw and the nut at the opposite end – without tightening it completely.





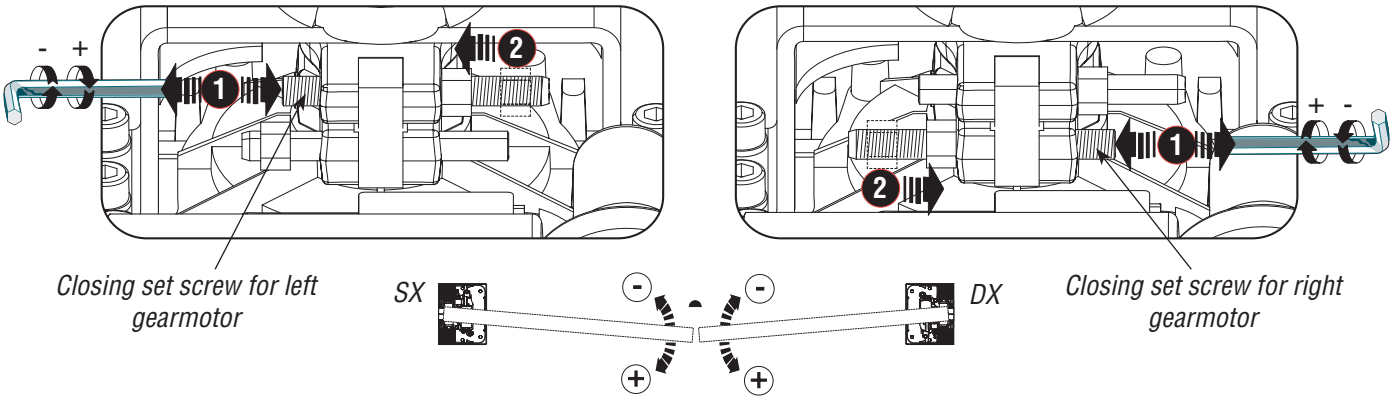
- Set the lever of the release group to the gearmotor.



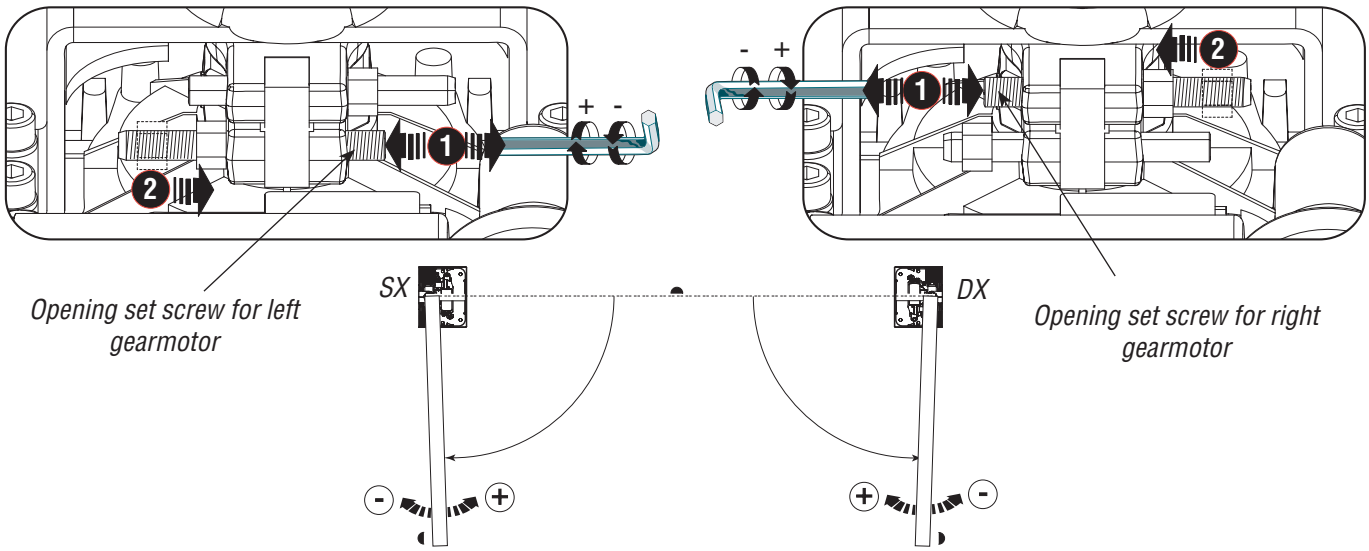


5.7 Adjusting the mechanical endstops

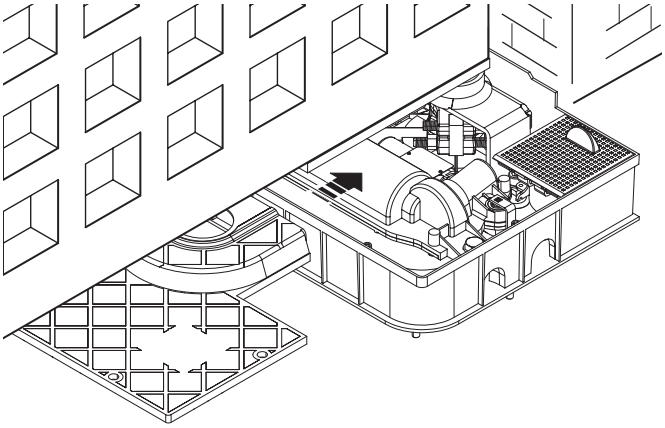
- Before tightening the set screws to adjust the opening and closing of the gate, release the gearmotors (see paragraph for manual releasing).
Procedure for adjusting the closing: turn the M10x90 (1) set screw clockwise or counter clockwise; lock the nut so that it is opposite the thread (2).

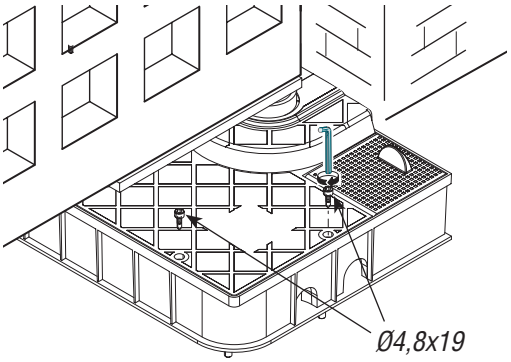


Procedure for adjusting the opening: follow the same steps used in adjusting the closing.



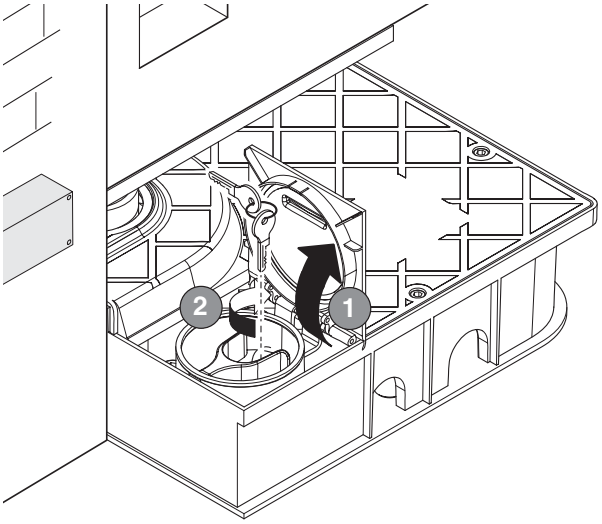
- After making the necessary adjustments and electrical connections (see following chapter), place the cover onto the box and screw it down using the supplied cylinder-head screws.

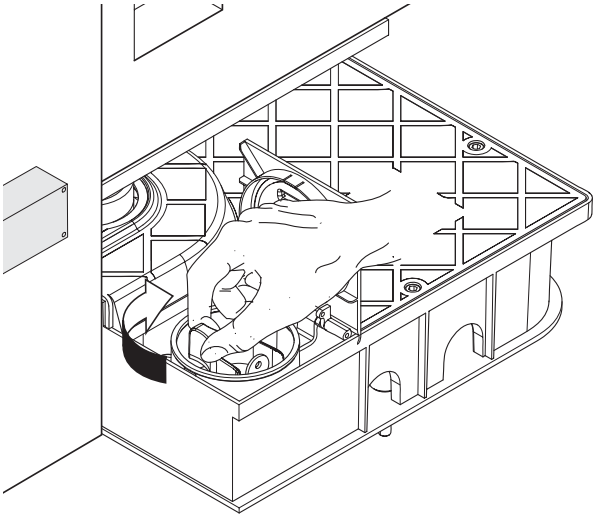




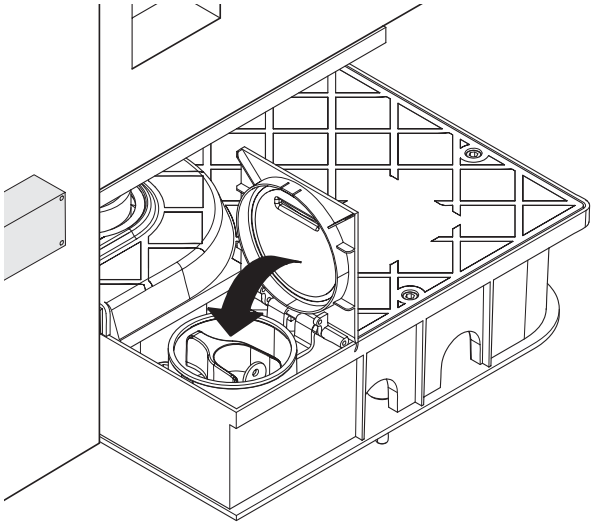
5.7 Manual release of the gearmotor

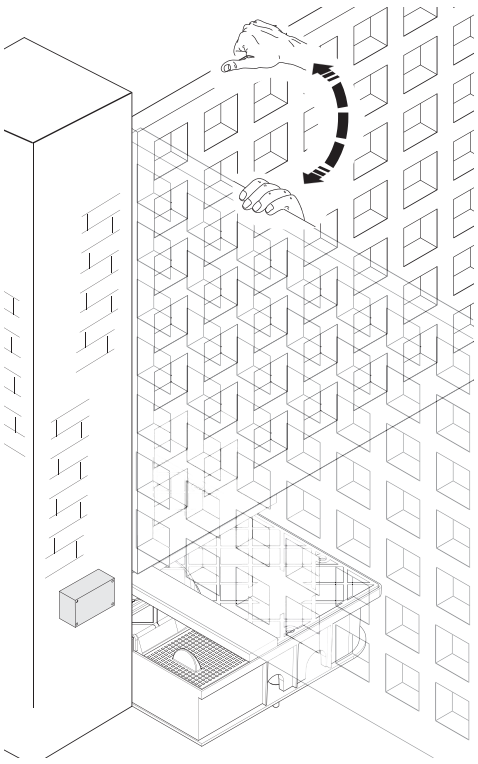
- Lift the cover to the release group, insert and turn the key.Turn the release handle clockwise.





- Close the door before manually moving the gate.

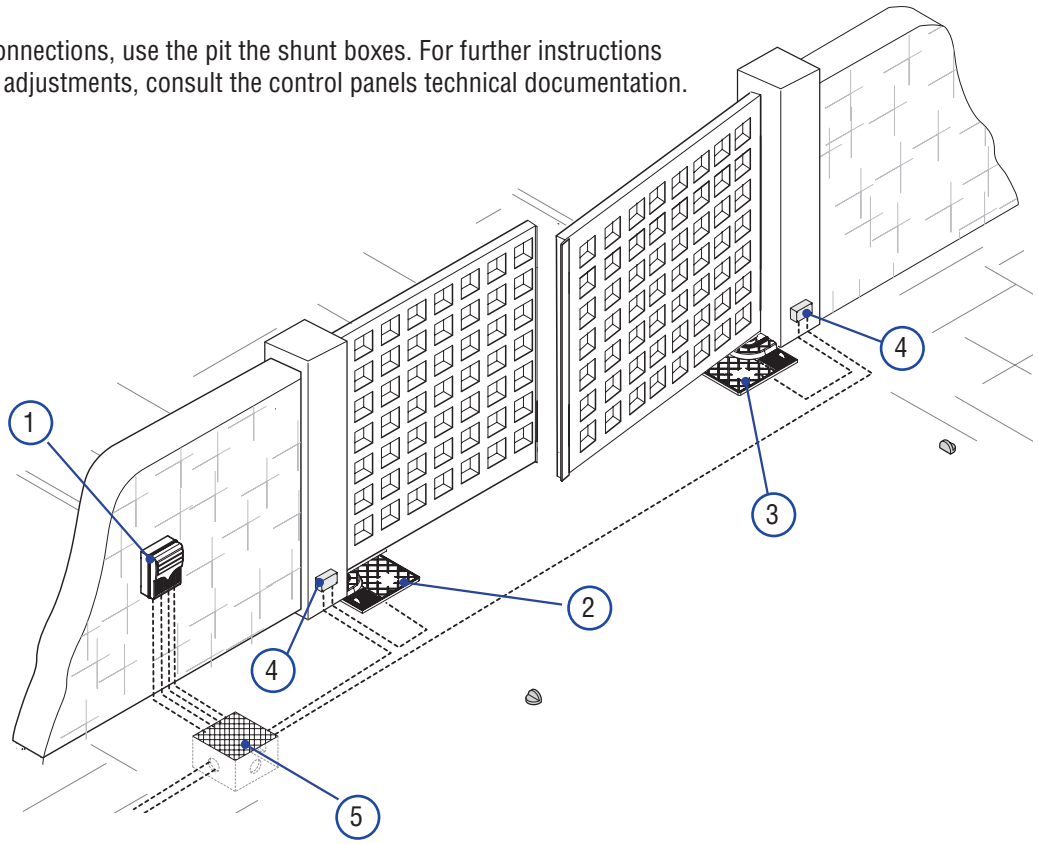




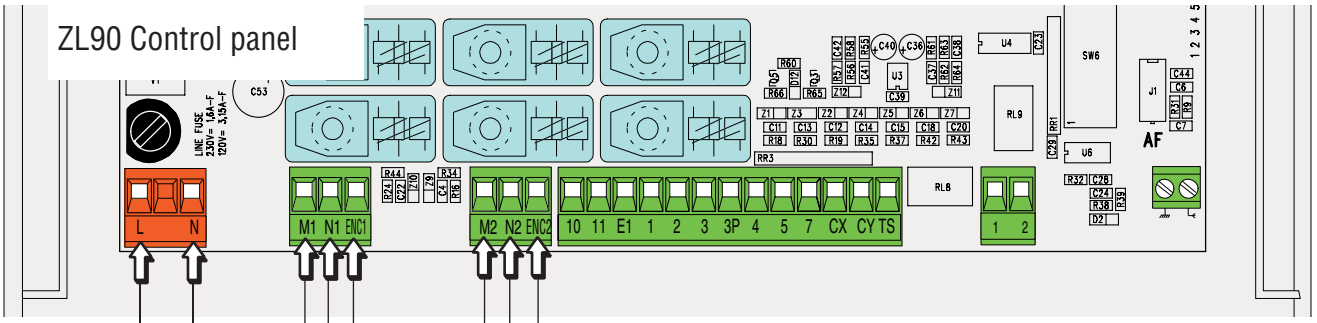
6 Connecting to the control panel

When making electrical connections, use the pit the shunt boxes. For further instructions concerning functions and adjustments, consult the control panels technical documentation.

1) Control panel
2) Left gearmotor
3) Right gearmotor
4) Shunt box
5) Junction pit



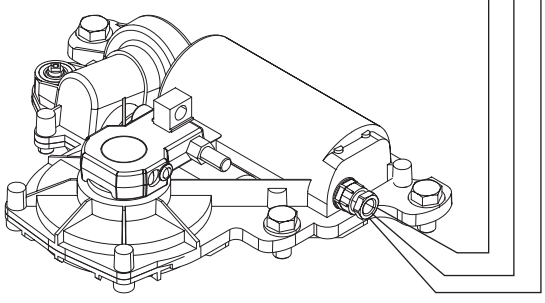
ZL90 Control panel



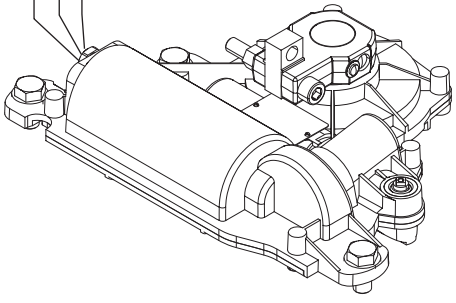
230V a.c.
power supply

BLUE
BROWN
BLACK

BLUE
BLACK
BROWN



Connecting the 24V d.c. delayed opening gearmotor

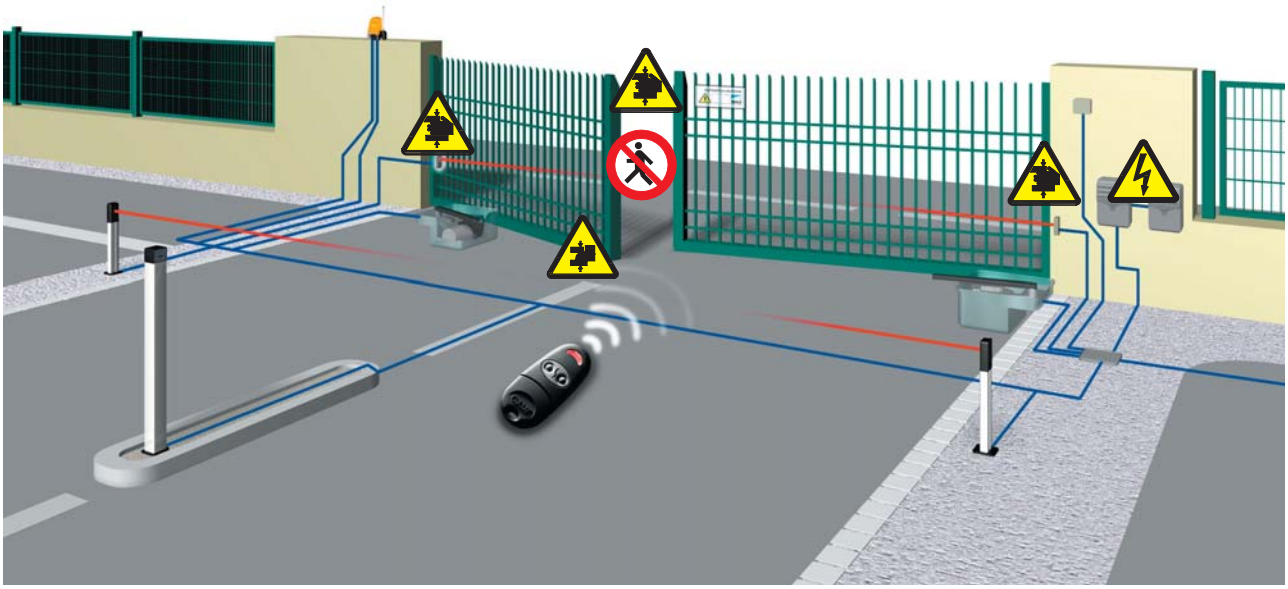


Connecting the 24V d.c. delayed closing gearmotor

7 Safety instructions

Important safety instructions

This product must only be employed for its originally intended use. Any other use is wrong and potentially dangerous. The manufacturer cannot be held liable for any damages resulting from wrongful, erroneous or negligent uses.
Avoid working close to the hinges or other moving mechanical parts. Stay out of the opening/closing arc when operator is in motion. Do not exercise force against the motion of the operator as this could result in potentially dangerous situations.



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

Danger of crushing hands

Danger! High voltage

Danger of crushing feet

No transit during operation

8 Maintenance

8.1 Periodic maintenance

Periodic maintenance to be carried out by the end-user is as follows: wipe clean the glass surface of the photocells; check that the safety devices work properly; remove any obstructions.
We suggest checking the state of lubrication and tightness of the anchoring screws on the operator.

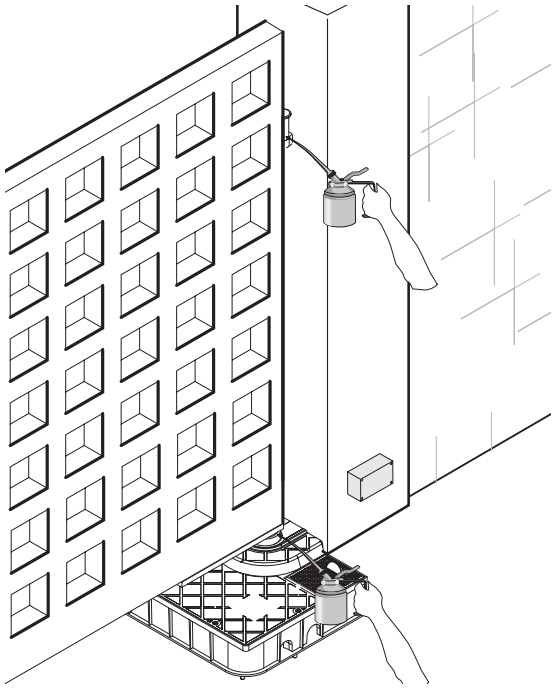
To check the efficiency of the safety devices, move an object in front of the photocells when gate is closing. If the operator inverts the motion or stops, the photocells are working properly.

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

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

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

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



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

8.2 Trouble shooting

MALFUNCTIONS	POSSIBLE CAUSES	CHECK AND REMEDIES
The gate will not open nor close	• There is no power • The gearmotor is released • The remote control's batteries are run down • The transmitter is broken • The stop button is either stuck or broken • The opening/closing button or the key selector are stuck	• Check that the power is up • Call assistance • Replace batteries • Call assistance • Call assistance • Call assistance
The gate opens but will not close	• The photocells are engaged	• Check that photocells are clean and in good working order • Call assistance
The flasher does not work	• The bulb is burnt	• Call assistance

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

Date	Notes	Segnature

8.3 Extra-ordinary maintenance

⚠ The following table serves to note down any extraordinary maintenance, repairs or improvements performed by specialised firms.
N.B.: Any extraordinary maintenance must be performed by specialised technicians.

Extra-ordinary maintenance log

Installer's stamp	Operator name
	Date of job
	Technician's segnature
	Requester's segnature
Job performed_____	
Installer's stamp	Operator name
	Date of job
	Technician's segnature
	Requester's segnature
Job performed_____	
Installer's stamp	Operator name
	Date of job
	Technician's segnature
	Requester's segnature
Job performed_____	

Installer's stamp	Operator name
	Date of job
	Technician's segnature
	Requester's segnature
Job performed_____	
_____	
Installer's stamp	Operator name
	Date of job
	Technician's segnature
	Requester's segnature
Job performed_____	
_____	

9 Demolition 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 continue our efforts to protect the environment—which CAME considers one of the cardinal elements in the developmentof its operational and market strategies—simply by observing brief recommendations as regards disposal:

DISPOSAL OF PACKAGING
The packaging components (cardboard, plastic, etc.) are all classifiable as solid urban waste products and may be disposed of easily, keeping in mind recycling possibilities.

Prior to disposal, it is always advisable to check specific regulations in force in the place of installation.

PLEASE DISPOSE OF PROPERLY!

PRODUCT DISPOSAL
Our products are made up of various types of materials. Most of them (aluminium, plastics, iron, electrical wires, etc.) may be disposed of in normal garbage collection bins and can be recycled by disposing of in specific recyclable material collection bins and disposal in authorized centres.

Other components (electrical boards, remote control batteries, etc.), however, may contain polluting substances.

They should therefore be removed and given to qualified service companies for proper disposal.

Prior to disposal, it is always advisable to check specific regulations in force in the place of disposal.

PLEASE DISPOSE OF PROPERLY!

10 Maker's statement

CE

MANUFACTURER'S DECLARATION OF CONFORMITY

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

CAME Cancelli Automatici S.p.A.
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tel (+39) 0422 4940 - fax (+39) 0422 4941
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IMPORTANT WARNING!
Do not use the equipment specified here above, before completing the full installation In full compliance with the Machinery Directive 98/37/EC

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

IN-GROUND OPERATOR FOR SWING GATES
FROG-J

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

98/37/CE - 98/79/CE	Machinery Directive
98/336/CEE - 92/31/CEE	Electromagnetic compatibility Directive
73/23/CEE - 93/68/CE	Low Voltage Directive
89/106/CEE	Construction products Directive

EN 13241-1	EN 12635	EN 61000-6-2
EN 12453	EN 12978	EN 61000-6-3
EN 12445	EN 60335-1	EN 60204-1

MANAGING DIRECTOR
Mr. Andrea Menuzzo

Reference code to request a true copy of the original: ***DDF B EN ver.1.0***

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CAME
CANCELLI AUTOMATICI