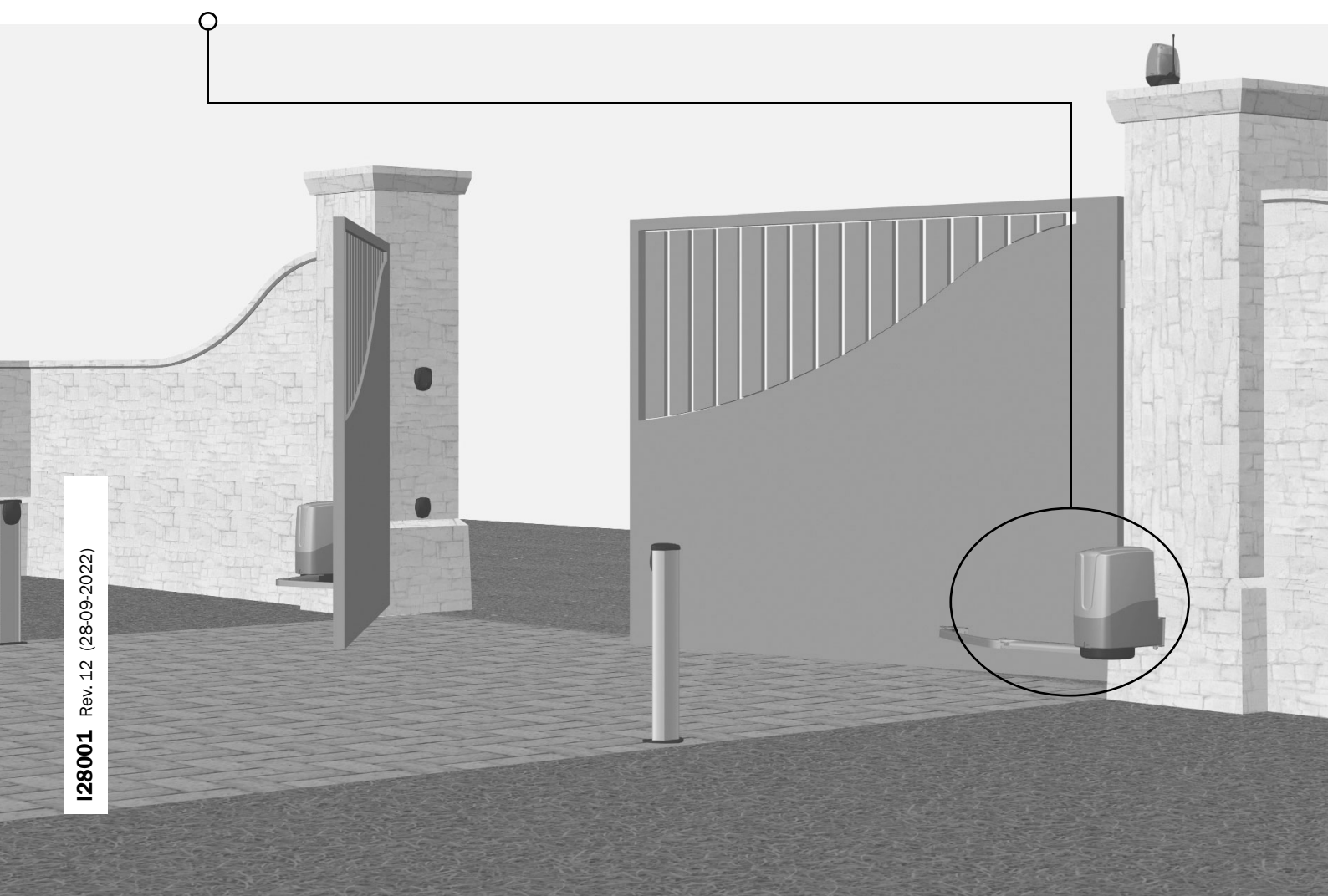
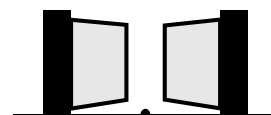


GEKO

DEA[®]

move as you like



I28001 Rev. 12 (28-09-2022)

GEKO

Electro-mechanical operator for swing gates

Operating instructions and warnings

Index

1	Warnings Summary	EN-1	6	Start-up	EN-6
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EN

1 WARNINGS SUMMARY

WARNING! IMPORTANT SAFETY INSTRUCTIONS. CAREFULLY READ AND FOLLOW ALL WARNINGS AND INSTRUCTIONS THAT ACCOMPANY THE PRODUCT SINCE INCORRECT INSTALLATION COULD CAUSE HARM TO PEOPLE, ANIMALS OR THINGS. WARNINGS AND INSTRUCTIONS PROVIDE IMPORTANT INFORMATION REGARDING SAFETY, INSTALLATION, USE AND MAINTENANCE. KEEP THE INSTRUCTIONS TOGETHER THE TECHNICAL DOCUMENTATION AND FOR FUTURE REFERENCE.

⚠ **WARNING** The device may be used by children of less than 8 years of age, people with reduced physical, mental or sensory impairment, or generally anyone without experience or, in any case, the required experience provided the device is used under surveillance or that users have received proper training on safe use of the device and are aware of the dangers related to its use.

⚠ **WARNING** Do not allow children to play with the device, the fixed commands or the radio controls of the system.

⚠ **WARNING** Product use in abnormal conditions not foreseen by the manufacturer may generate hazardous situations; meet the conditions indicated in these instructions.

⚠ **WARNING DEA** System reminds all users that the selection, positioning and installation of all materials and devices which make up the complete automation system, must comply with the European Directives 2006/42/CE (Machinery Directive), 2014/53/UE (RED Directive). In order to ensure a suitable level of safety, besides complying with local regulations, it is advisable to comply also with the above mentioned Directives in all extra European countries.

⚠ **WARNING** Under no circumstances use the device in an explosive atmosphere or in areas that may be corrosive or could damage product parts. Check that the temperatures at the installation site are suitable and comply with the temperatures declared on the product label.

⚠ **WARNING** When working with the “dead man” switch, make sure that there are no people in the area where the automatism is being used.

⚠ **WARNING** Check that there is a switch or an omni polar magneto-thermal circuit breaker that enables complete disconnection in case of over voltage category III conditions installed upstream from the power system.

⚠ **WARNING** To ensure an appropriate level of electrical safety always keep the 230V power supply cables apart (minimum 4mm in the open or 1 mm through insulation) from low voltage cables (motors power supply, controls, electric locks, aerial and auxiliary circuits power supply), and fasten the latter with appropriate clamps near the terminal boards.

⚠ **WARNING** If the power cable is damaged, it must be replaced by the manufacturer or its technical assistance service or, in any case, by a person with similar qualifications to prevent any risk.

⚠ **WARNING** All installation, maintenance, cleaning or repair operations on any part of the system must be performed exclusively by qualified personnel with the power supply disconnected working in strict compliance with the electrical standards and regulations in force in the nation of installation.

Cleaning and maintenance destined to be performed by the user must not be performed by unsupervised children.

⚠ **WARNING** Using spare parts not indicated by **DEA** System and/or incorrect re-assembly can create risk to people, animals and property and also damage the product. For this reason, always use only the parts indicated by **DEA** System and scrupulously follow all assembly instructions.

⚠ **WARNING** Changing the closing intensity could lead to dangerous situations. Therefore, qualified personnel should only perform increases to the closing force. After adjustment, compliance with regulatory limits values should be detected with a force impact-measuring instrument. The sensitivity of the obstacle detection may be adjusted gradually to the door (see programming instructions). The anti-crushing device operation must be checked after each manual adjustment. Manual modification of the force can only be done by qualified personnel by performing the measurement test according to EN 12445. Modifications to the force adjustment must be documented in the machine manual.

⚠ **WARNING** The compliance of the internal sensing obstacles device to requirements of EN12453 is guaranteed only if used in conjunction with motors fitted with encoders.

⚠ **WARNING** Any external security devices used for compliance with the limits of impact forces must be conform to standard EN12978.

♻ **WARNING** In compliance with EU Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), this electrical product should not be treated as municipal mixed waste. Please dispose of the product and bring it to the collection for an appropriate local municipal recycling.

EVERYTHING THAT IS NOT EXPRESSLY PROVIDED FOR IN THE INSTALLATION MANUAL IS NOT ALLOWED. CORRECT OPERATOR OPERATION IS ONLY ENSUED WHEN THE REPORTED DATA IS RESPECTED. THE COMPANY DOES NOT RESPOND FOR DAMAGE CAUSED BY FAILURE TO COMPLY WITH THE INSTRUCTIONS CONTAINED IN THIS MANUAL. WITHOUT AFFECTING THE ESSENTIAL FEATURES OF THE PRODUCT, THE COMPANY RESERVES THE RIGHT TO MAKE ANY CHANGES DEEMED APPROPRIATE AND AT ANY TIME IN ORDER TO TECHNICALLY, STRUCTURALLY AND COMMERCIALY IMPROVE THE PRODUCT WITHOUT BEING REQUIRED TO UPDATE THIS DOCUMENT.

2 PRODUCT DESCRIPTION

Models and contents of the package

With the name GEKO is identified a series of operators for the automation of swing gates and doors of medium and small size. All motorized models, involve the use of advanced control units (NET series) equipped with anti-crushing sensor, 433 MHz radio receiver, speed control and slowdown in opening and closing.

GEKO models are designed for residential/collective semi-intensive use, according to the duty cycle of this operator.

Complementary accessories are shown in the table "PRODUCT ACCESSORIES" (p. I-4).

GEKO is an electromechanical operator essentially constituted by a gear motor that rotates an articulated arm (or sliding arm); this arm is attached to the leaf to be moved.

Inspect the "Contents of the Package" (Pic. 1) and compare it with your product for useful consultation during assembly.

Transport

GEKO is always delivered packed in boxes that provide adequate protection to the product, however, pay attention to all information that may be provided on the same box for storage and handling.

3 TECHNICAL DATA

	OPERATOR
Motor power supply (V)	24 V ===
Capacity (W)	80 W
Max torque (Nm)	180 Nm
Duty cycle (cycles/hour)	20
Maximum n° of operations in 24 hour	60
Operating temperature range (°C)	-20÷50
Opening time 90°(s)	16
Sound pressure emitted (dBA)	<70
Product weight with package (kg)	12
Protection degree	IP44

	CONTROL BOARD
Power supply (V)	230 V ~ ±10% (50 Hz)
Rated power transformer (VA)	120 VA (230/22V)
Fuse F2 (A) (transformer)	2A
Batteries	2x 12V 1,3A
Fuse F1 (A) (batteries input)	15A
24V operators outputs	2x 5A
Auxiliaries power supply output	24 V ===
Safety devices power supply output	(24V_AUX + 24V_ST = max 200mA)
"Warning" output	+24 V === max 15 W
Electric lock output	24V === max 5W oppure max 1 art. 110
Flashing light output	24 V === max 15W
Receiver frequency	433,92 MHz
Transmitters type of coding	HCS fix-code - HCS rolling code - Dip-switch
Max remote controllers managed	100

4 INSTALLATION AND ASSEMBLY

4.1 For a satisfactory installation of the product is important to:

- Verify that the gate complies with the legal requirements and then define the complete project of the installation;
- Verify that the gate is well balanced and that it has no points of friction in opening and closing;
- Identify an area that allows a smooth and safe manual operation of the operator;
- Verify that the operator bulk is compatible with the area chosen for the fitting (Pic. 2);
- Ensure that the space for the rotation of the arm is sufficient (Pic. 3).
- Use the length/weight graphic and the provided installations dimensions (Pic. 4) evaluating whether you prefer a **90°** or a **120°** opening.

4.2 Once you have defined and satisfied these requirements, proceed with the assembly:

- fix the operator fixing plate to the pillar by using screws and plugs suitable to the type of surface and material (Pic. 5);
- mount the straight arm by using the supplied screw and washer (Pic. 6);
- insert the operator inside the wall connection plate and fix it with the provided screws and nuts (Pic. 7);
- Mount the swing fixing hinge and the curved arm to the straight arm by using the provided pins and seeger rings (Pic. 8);
- weld the hinge to the gate or fix it with screws suitable to the type of material;

4.3 How to unlock the operator

WARNING Disconnect the power supply from the control panel before releasing the operator. In case you cannot turn the power off, you will necessarily have to re-lock the motor in the position in which it was unlocked.

Lift the cover window (Pic. 9a) and, after having inserted the unlocking key, rotate counterclockwise until it stops (Fig. 9b).

4.4 How to fix and adjust the mechanical limit switches

- Unlock the operator;
- Rotate the wing to the position of complete opening, position the mechanical limit switch on the stop with the straight arm and fasten it with the provided screws (Pic. 10). If necessary, you can mount a second mechanical limit switch for the closing stop. In this case follow the above directions by moving the door in the desired closed position and fix it with the screws provided in detention;
- Repeat the previous step for a possible second door;
- Secure the protective cover on the straight arm with the screws provided (Pic. 10).

5 ELECTRICAL CONNECTIONS

Run the motor connections following the wiring diagrams.

WARNING For adequate electrical safety, keep low safety voltage wires (controls, electro-locks, antenna, auxiliary power) clearly separate from 230V ~ power wires (**minimum 4 mm in air or 1 mm via supplementary insulation**) placing them in plastic raceways and securing them with adequate clamps near terminal boards.

WARNING For connection to the mains, use a multipolar cable having a minimum section 3x1,5 mm² and complying with the current regulations. For connecting the motors, use a minimum cross section 1,5 mm² cable and complying with the current regulations. As an example, if the cable is out side (outdoor), must be at least equal to H05RN-F, whereas if it (in a raceway), must be at least equal to H05VV-F.

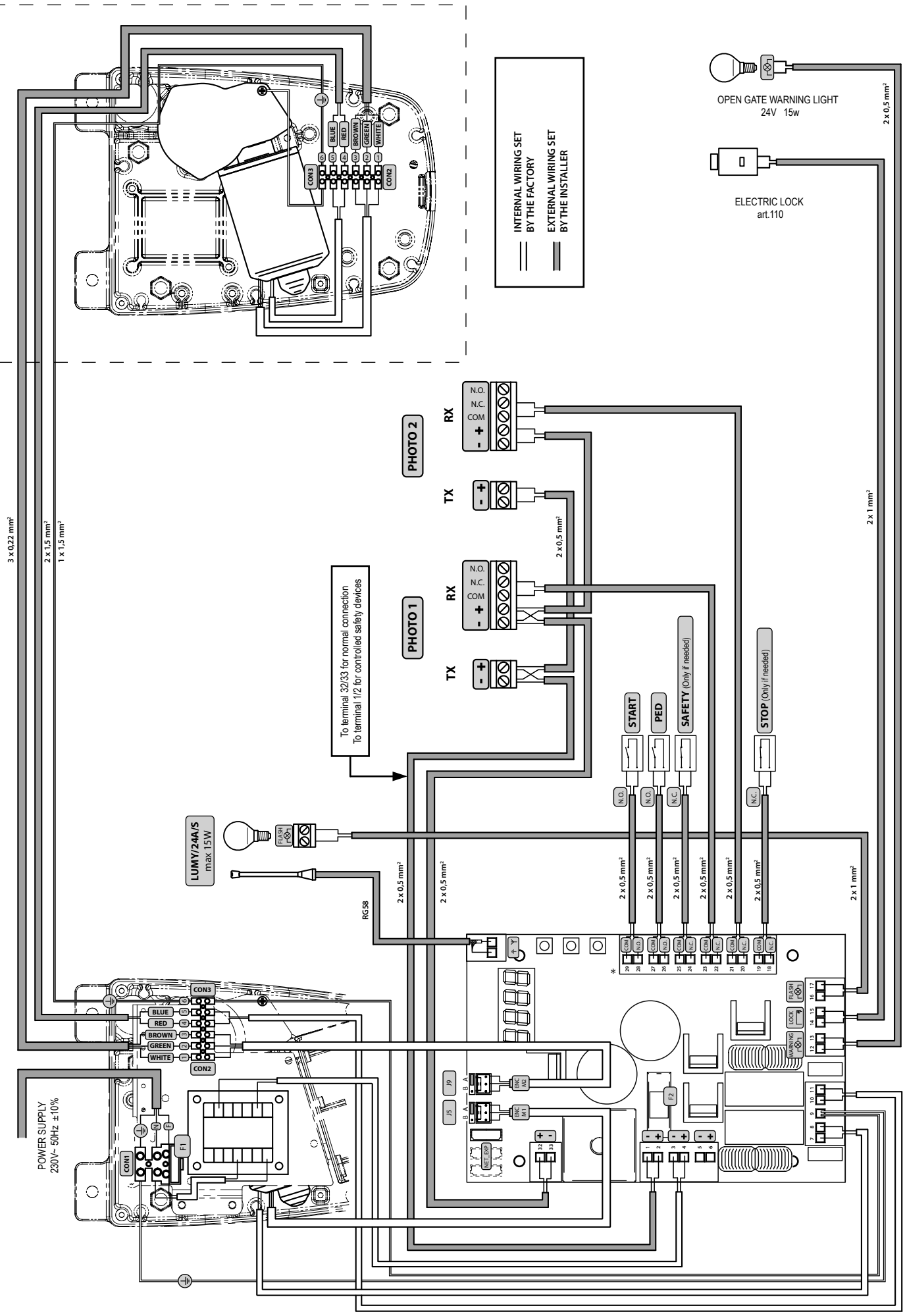
WARNING All wires must be striped and unsheathed in the immediate vicinity of terminals. Keep wires slightly longer to subsequently eliminate any excess.

WARNING Maintain the ground conductor at a major length respect the active conductors so that, if the cable exit from its fixing housing, the active conductors tighten up as first.

Program the control board to complete all adjustments. It is now possible to supply a complete installation in compliance with all standards required for gate automation. **See the instructions provided with the control panel to be connected.**

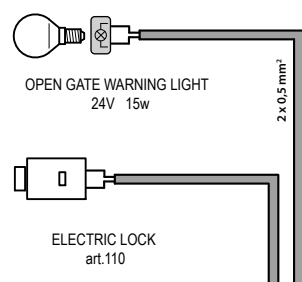
Finally, verify that all adjustments operations have been correctly performed and that safety devices and unlocking device properly work.

Mot 2 (Only if present)



INTERNAL WIRING SET
BY THE FACTORY

EXTERNAL WIRING SET
BY THE INSTALLER



To terminal 32/33 for normal connection
To terminal 11/2 for controlled safety devices

POWER SUPPLY
230V-50Hz ± 10%

LUMY/24A/5
max 15W

6 START-UP

The start-up phase is very important to ensure maximum security and compliance to regulations, including all the requirements of EN 12445 standard which establishes the test methods for testing the automation for gates.

DEA System reminds that all installation, maintenance, cleaning or repair operations on any part of the system must be performed exclusively by qualified personnel who must be responsible of all texts require by the eventual risk;

6.1 Installation test

The testing operation is essential in order to verify the correct installation of the system. **DEA System** wants to summarize the proper testing of all the automation in 4 easy steps:

- Make sure that you comply strictly as described in paragraph 2 “WARNINGS SUMMARY”;
- Test the opening and closing making sure that the movement of the leaf match as expected. We suggest in this regard to perform various tests to assess the smoothness of the gate and defects in assembly or adjustment;
- Ensure that all safety devices connected work properly;
- Perform the measurement of impact forces in accordance with the standard 12445 to find the setting that ensures compliance with the limits set by the standard EN12453.

WARNING Using spare parts not indicated by **DEA System** and/or incorrect re-assembly can create a risk to people, animals and property and also damage the product. For this reason, always use only the parts indicated by **DEA System** and scrupulously follow all assembly instructions.

6.2 Unlocking and Manual operation

In the event of malfunctions or simple power failure, release the motor (Pic. 9) and perform the operation manually.

The knowledge of the unlocking device is very important because, in times of emergency, lack of speed in operating this device can cause danger.

WARNING The efficacy and safety of manual operation of the automation is guaranteed by **DEA System** only if the installation has been installed correctly and with original accessories.

7 MAINTENANCE

Good preventive maintenance and regular inspection ensure long working life. In the table below you will find a list of inspections/ maintenance operations to be programmed and executed periodically.

Consult the TROUBLE-SHOOTING” table whenever anomalies are observed in order to find the solution to the problem and contact **DEA System** directly whenever the solution required is not provided.

INTERVENTION TYPE	PERIODICITY
cleaning of external surfaces	6 months
checking of screw tightening	6 months
checking of release mechanism operation	6 months
greasing of articulated joint	1 year


TROUBLE-SHOOTING	
Description	Possible solutions
When the opening command is given, the gate wing fails to move and the operator’s electric motor fails to start.	The operator is not receiving correct power supply. Check all connections, fuses, and the power supply cable conditions and replace or repair it if necessary. If the gate does not close check if the photocells work properly.
When the opening command is given, the motor starts but the gate leaf fails to move.	Make sure the unlocking system is closed.
	Make sure that the electronic device for power adjustment is in good condition.
The operator jerks or is noisy during movement, it stops midway or else it does not start.	If the leaf of the gate does not move freely, release the operator and readjust the rotation points.
	The power of the gearmotor may be insufficient for the characteristics of the gate’s leaf; check the choice of model whenever required.
	If the plate fastening the operator to the gate bends or is inappropriately fastened, repair it or reinforce it.

8 PRODUCT DISPOSAL

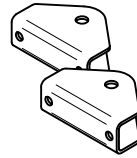
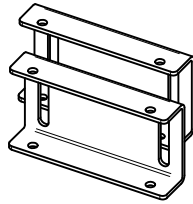
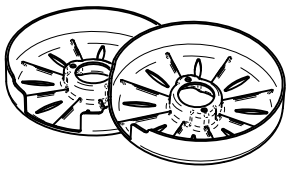
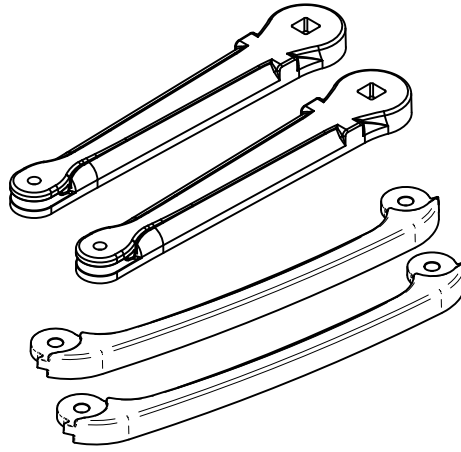
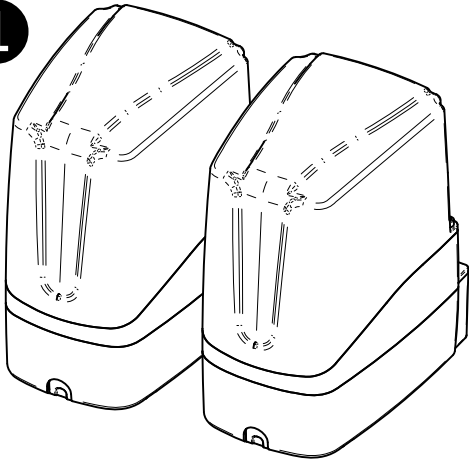
GEKO consists of materials of various types, some of which can be recycled (electrical cables, plastic, aluminum, etc. ..) while others must be disposed of (electronic boards and components).

Proceed as follows:

1. Disconnect the power supply;
2. Disconnect and disassemble all the accessories connected. Follow the instructions in reverse to that described in the section "Installation";
3. Remove the electronic components;
4. Sorting and disposing of the materials exactly as per the regulations in the country of sale.

 **WARNING** In line with EU Directive 2012/19/EG for waste electrical and electronic equipment (WEEE), this electrical product must not be disposed of as unsorted municipal waste. Please dispose of this product by returning it to your local municipal collection point for recycling.

1



2



4



4



4



2



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4



2



2



2



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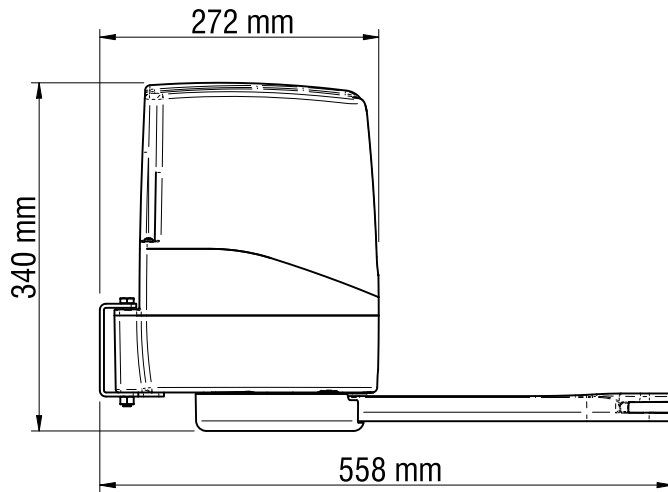
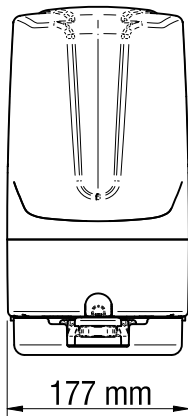


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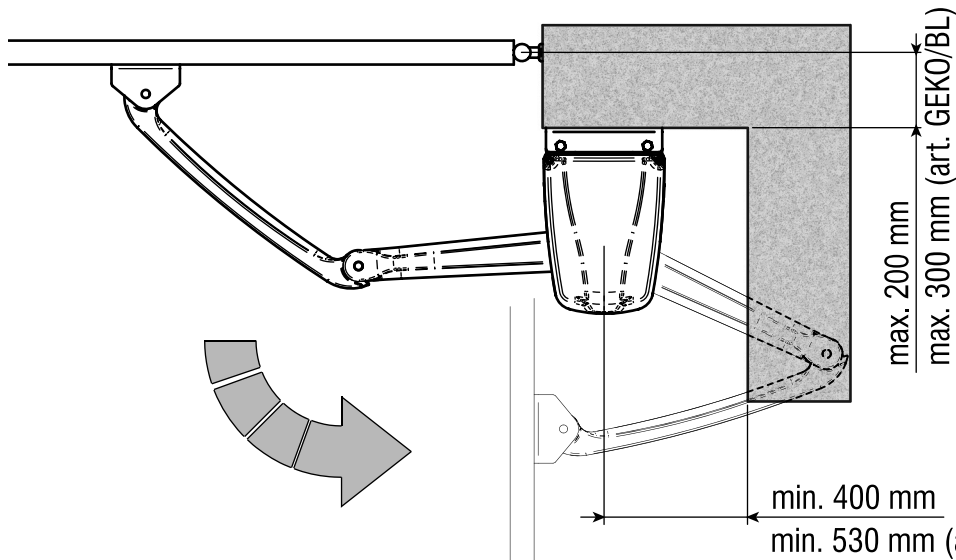


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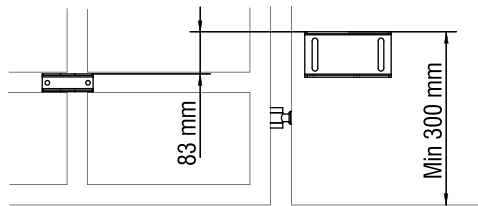
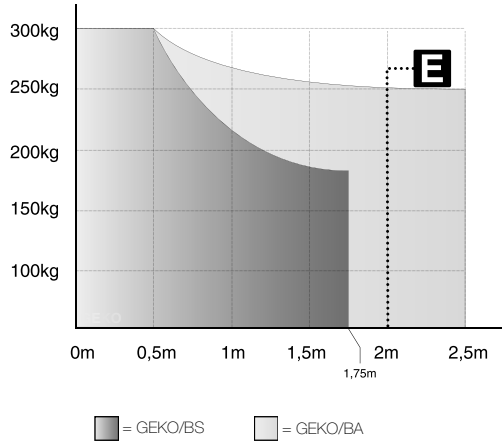
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3

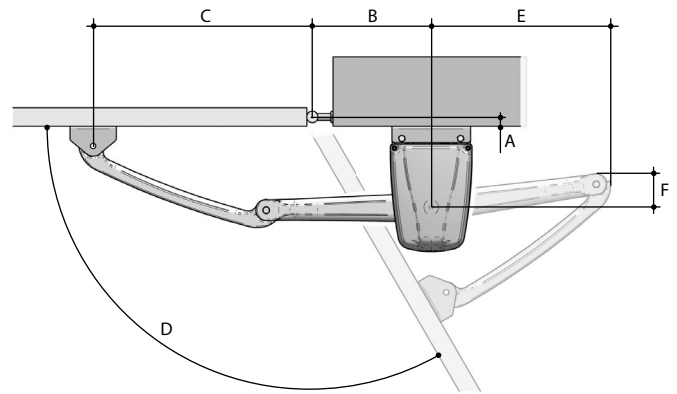
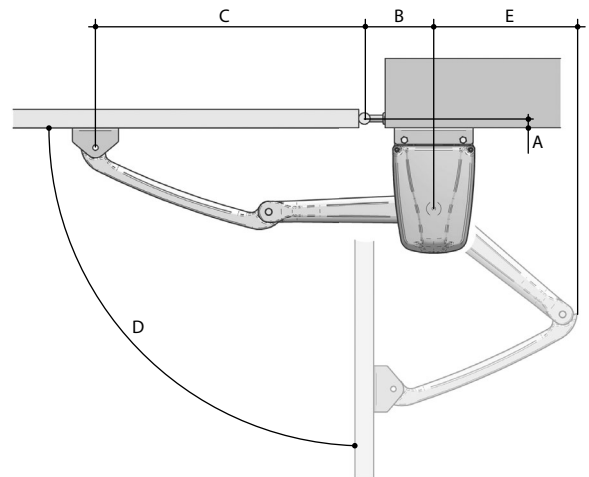


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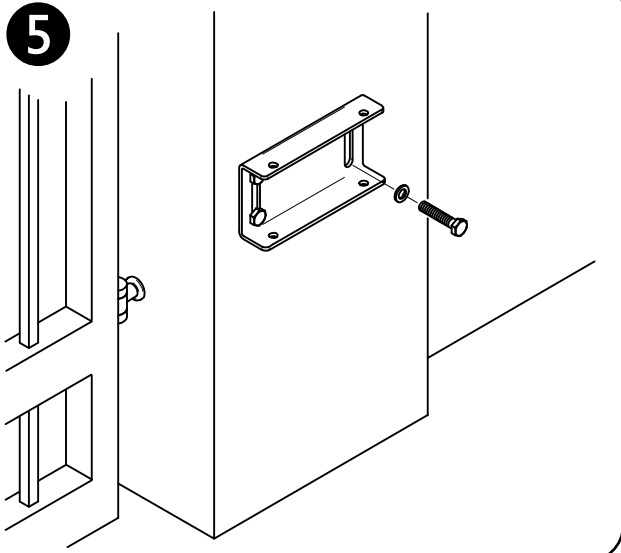
A	B	C	D	E	F
20	150	585	90°	310	-
50	150	580	90°	320	-
100	150	565	90°	335	-
120	150	560	90°	340	-
150	150	550	90°	345	-
180	150	540	90°	342	-
200	150	530	90°	340	-
200 *	150	750	90°	470	-
250 *	150	800	90°	480	-
300 *	150	800	90°	490	-
0	250	485	120°	390	62
0 ÷ 20	160	575	100°	360	-
0 ÷ 20	200	535	110°	390	-
20	260	475	120°	390	75
50	160	565	100°	375	-
50	220	510	110°	390	-

* Art. GEKO_BL

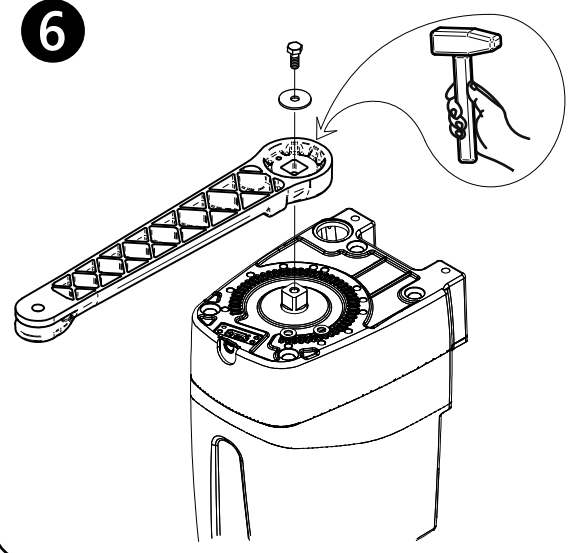


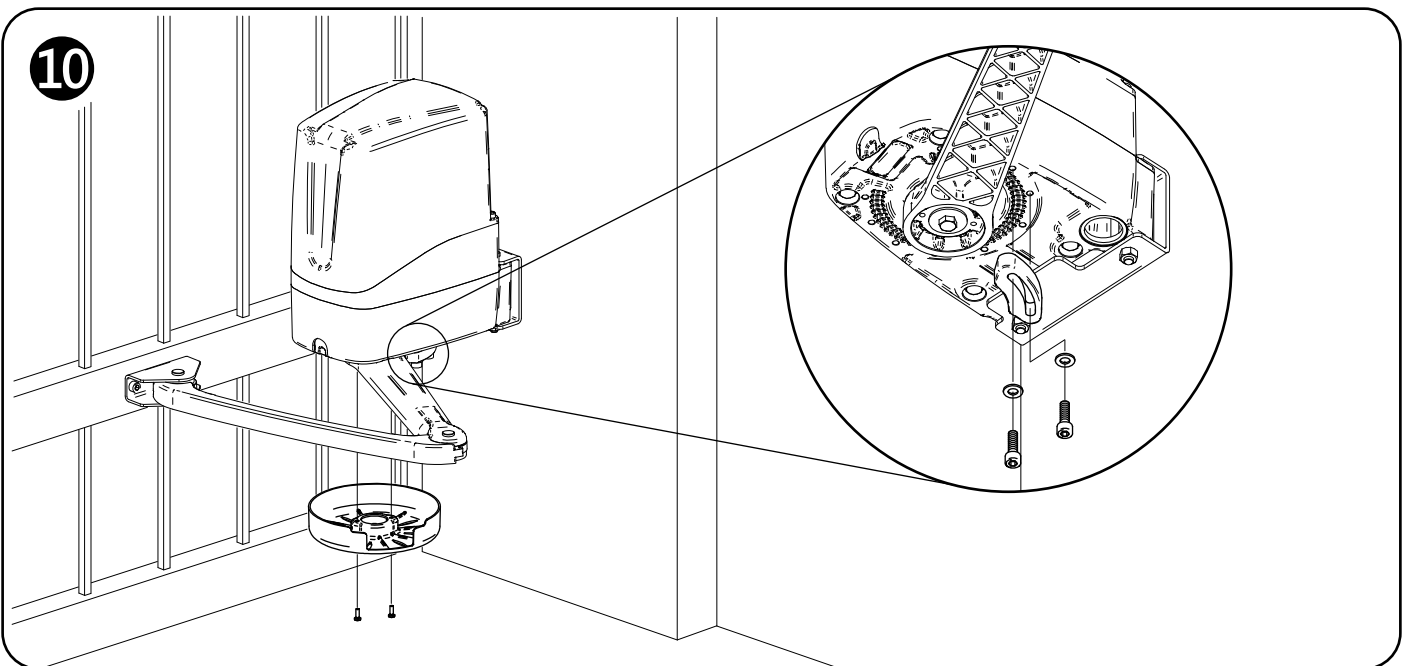
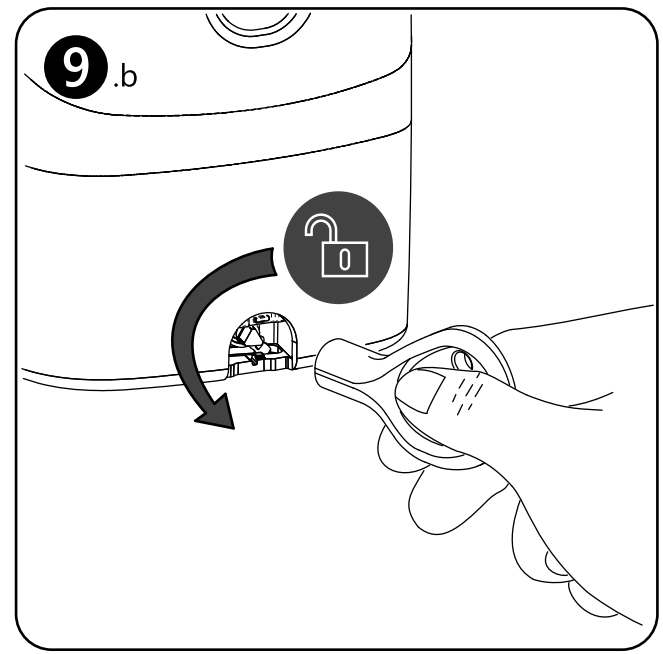
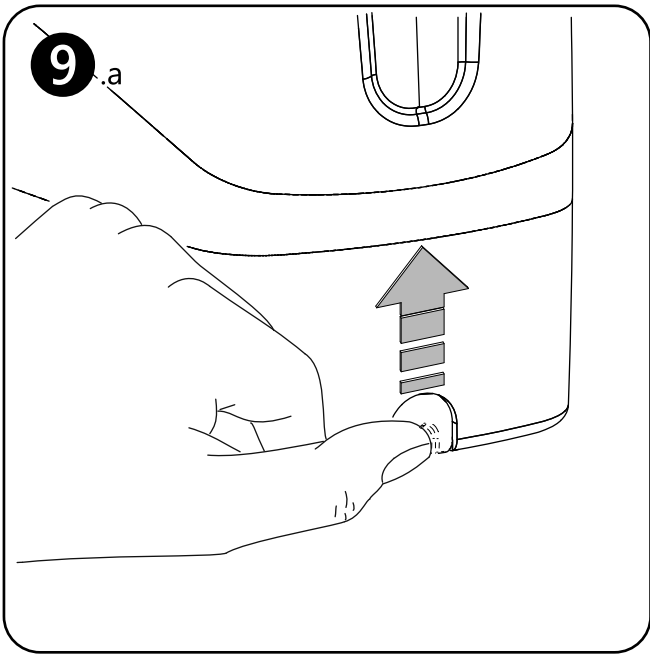
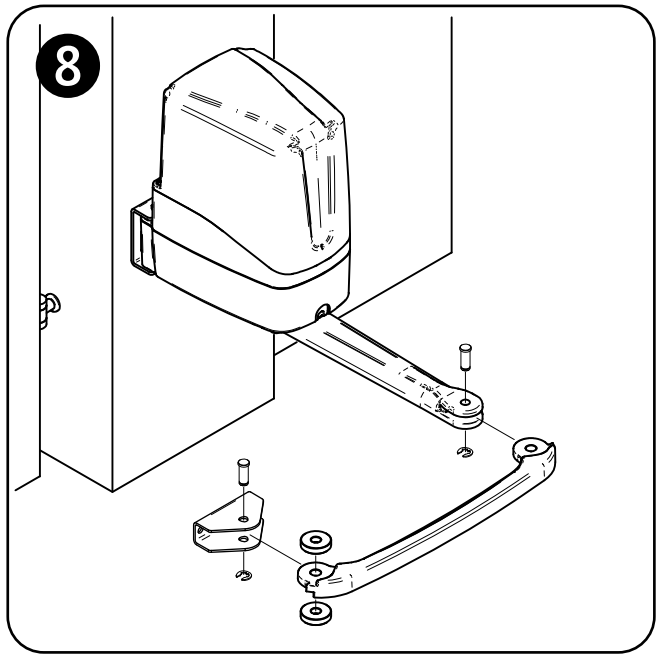
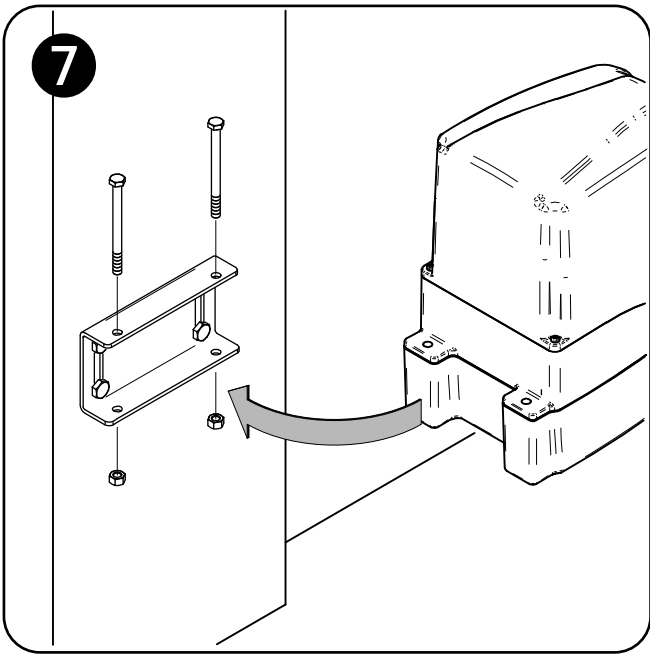
Art. GEKO_BLA					
A	B	C	D	E	F
50	150	780	90°	365	-
100	150	770	90°	380	-
150	150	750	90°	390	-
180	150	730	90°	385	50

5



6





Article Code	Descrizione, Description, Description, Beschreibung, Descripción, Descrição, Opis	
GEKO/BA 629260		Braccio articolato in alluminio - Aluminium articulated arm - Bras articulé aluminium - Gelenkarm in Aluminium - Braço articulado de aluminio - Braço articulado em alumínio - Ramię łamane aluminiowe - Шарнирный рычаг, алюминиевый
GEKO/BS 629261		Braccio a slitta - Rail sliding arm - Bras glissière - Schlittenarm Stahl, lackiert - Braço de patin - Braço em guia - Ramię ślizgowe - Скользящий рычаг
GEKO/BL 629262		Braccio lungo articolato in ferro - Long arm for GEKO, iron made - Bras long pour GEKO en fer - Gelenkarm Lang, Stahl lackiert - Braço largo para GEKO de hierro - Braço longo para GEKO em ferro - Długie ramię dla GEKO żelaza - Удлиненный рычаг, оцинкованная сталь, окрашен
GEKO/BLA 629263		Braccio lungo articolato in alluminio - Long arm for GEKO, aluminium made - Bras long pour GEKO en aluminium - Gelenkarm Lang, Aluminium - Braço largo para GEKO de aluminio - Braço longo para GEKO em alumínio - Długie ramię dla GEKO aluminium - Удлиненный рычаг, алюминиевый
GEKO/SF 629280		Cordino sblocco a filo per GEKO - Lanyard release by cable for GEKO - Dispositif de déverrouillage par câble pour GEKO - Notentriegelungssystem mit Seilzug - Cuerda para desbloqueo de hilo para GEKO - Desbloqueio por cabo para GEKO - Linka odblokowania do GEKO - Наружняя разблокировка тросом. Используется с GEKO
BAT KIT 629290		Kit batterie per 24V - Batteries Kit for 24V - Kit batterie pour 24V - Kit Pufferbatterie für 24V Antriebe - Kit baterías para 24V - Kit de baterías para 24V - Zestaw akumulatorów na 24V - Комплект батареи для 24В приводов

INSTRUCTIONS FOR THE FINAL USER

This guide has been prepared for the final users of the automatism; the installer is required to deliver this guide and illustrate its contents to the person in charge of the system. The latter must then provide similar instruction to all the other users. These instructions must be carefully conserved and easily available for consultation when required.

Good preventive maintenance and frequent inspection ensures the long working life of the product. Contact the installer regularly for routine maintenance and in event of anomaly.

SAFETY RULES

1. Always keep a safe distance from the automatism during operation and never touch any moving part.
2. Prevent children from playing near the automatism.
3. Perform the control and inspection operations prescribed in the maintenance schedule and immediately stop using the automatism whenever signs of malfunction are noted.
4. Never disassemble parts of the product! All maintenance and repair operations must be performed only by qualified personnel.
5. The release operation must sometimes be performed in emergencies! All users must be instructed on the use of the release mechanism and the location of the release keys.

GEKO RELEASE MECHANISM

WARNING Cut out the power supply of the control panel before manually releasing the door. If for some reason it is not possible to cut out the power supply, it will be necessary to bring the door and lock it in the same position where it has been released.

All GEKO models are equipped with a release device which must be operated as follows:

- **Disconnect the power supply;**
- Lift the cover window (Pic. 9a) and, after having inserted the unlocking key, rotate counterclockwise until it stops (Fig. 9b).
- The opposite procedure returns GEKO operator to normal working conditions.

WARNING: During this operation gate may present uncontrolled movement: operate with extra care so to avoid any risk.

CLEANING AND INSPECTIONS

The only operation that the user can and must do is to remove branches, leaves, and any other object that might obstruct the gate's free movement. Warning! Always disconnect the power supply whenever performing operations on the gate!

