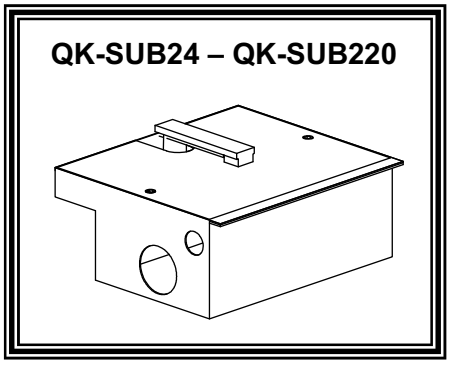
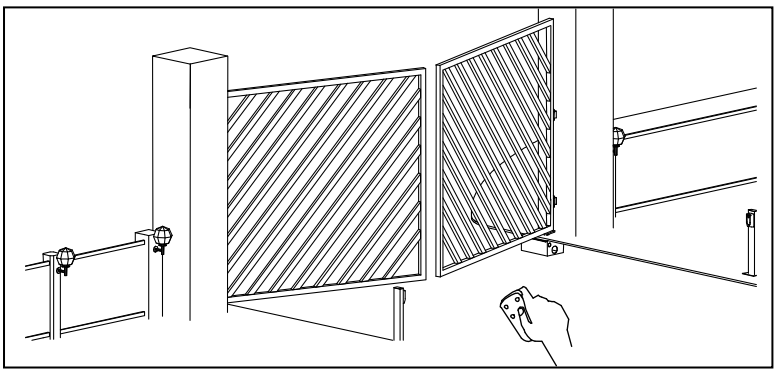
ENGLISH

use and maintenance manual

SUB

UNDERGROUND GEARMOTOR FOR SWING GATES





quiklo® opening solutions

V02/2013

C O N T E N T S

TECHNICAL FEATURES	QK-SUB220	QK-SUB24
Power	230Vac 50 / 60Hz	24Vdc
Current absorbed (motor) (A)	2,1	3,4
Power absorbed (W)	350	80
Capacitor (µF)	12,5	-
Protection level (IP)	67	67
Max. thrust (N)	380	300
Opening time (sec)	16	16
Working temp. (°C Min/Max)	-30/+70	-30/+70
Thermal cut-out (°C)	150	-
Working cycle (%)	50	100
Motor weight (kg)	10	10
Max. leaf length (m)	3,5	3,5

FOUNDATION BOX DIMENSION

DIMENSION	QK-CFS
LENGTH	375mm
WIDTH	320mm
HEIGHT	225mm

	Installation limits per leaf *Limiti di'impiego per anta* Contraintes d'utilisation			
	2m	2,5m	3m	3,5m
QK-SUB220	800kg	600kg	500kg	400kg
QK-SUB24	700kg	500kg	400kg	300kg

The values shown within the table above can be considerably reduced in windy areas.
I valori mostrati nella tabella sopra possono essere ridotti considerevolmente in zone ventose.
Les valeurs indiquées dans le tableau peuvent être considérablement réduits dans les zones venteuses.

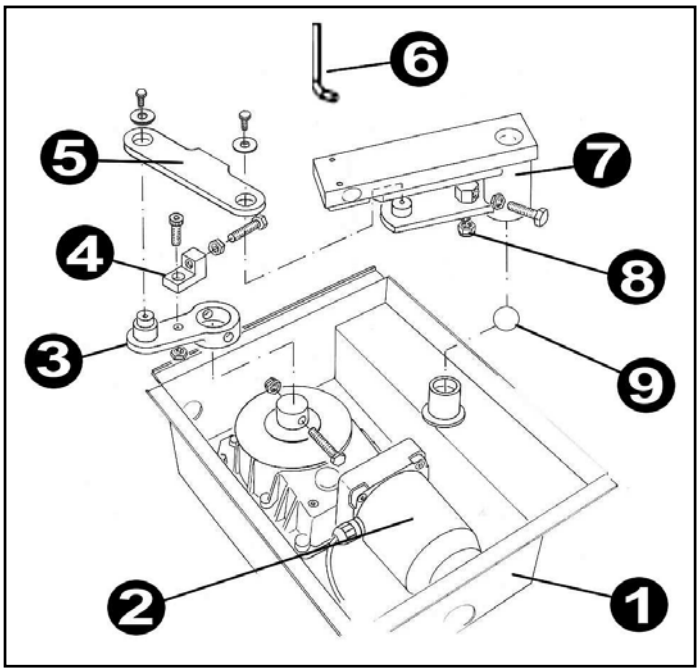
PRE-INSTALLATION CONTROL

Before installing the automation, you must check:

- size and weight of gate;
- wind and temperature factor;
- operating frequency;

Quiko Italy is liable only for products it manufactures and commercializes. Once automated, the gate becomes a machine and is therefore subjected to the rules of the " Machinery Directive". It is on the installer to verify its security. **WARNING:** Quiko Italy is not liable for any damages to people, animals or things due to unauthorized modifications, alterations or betterments on its products by third parties.

MATERIALS FOR INSTALLATION



1 – Foundation box;
2 – Gearmotor;
3 – Motor lever;
4 – Mechanical limit switch for closing (optional);
5 – Connecting lever;
6 – Unlocking lever;
7 – Support bracket;
8 – Mechanical limit switch for opening (optional);
9 – Sphere;

INSTALLATION

- The pivot point of the gate can be found on the foundation box, that is on the unlocking lever, on which the sphere will be inserted and the leaf will be welded;
- QK-SUB24 and QK-SUB220 operators can open gates up to a 110°angle;
- To open the gate up to a 180°angle please request the apposite optional accessory (QK-KIT180).

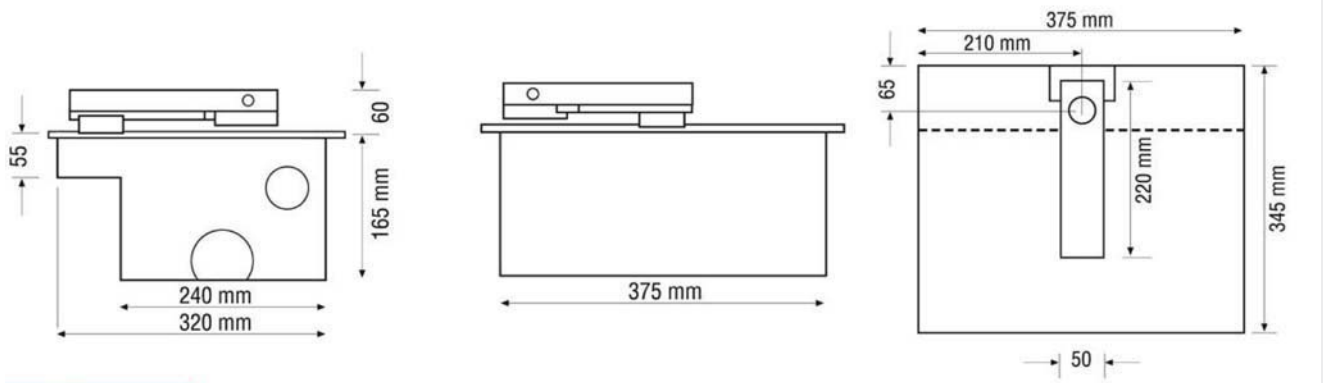


Figure A

- Once the foundation box has been settled in place, the gate can be mounted above. (Figure D)

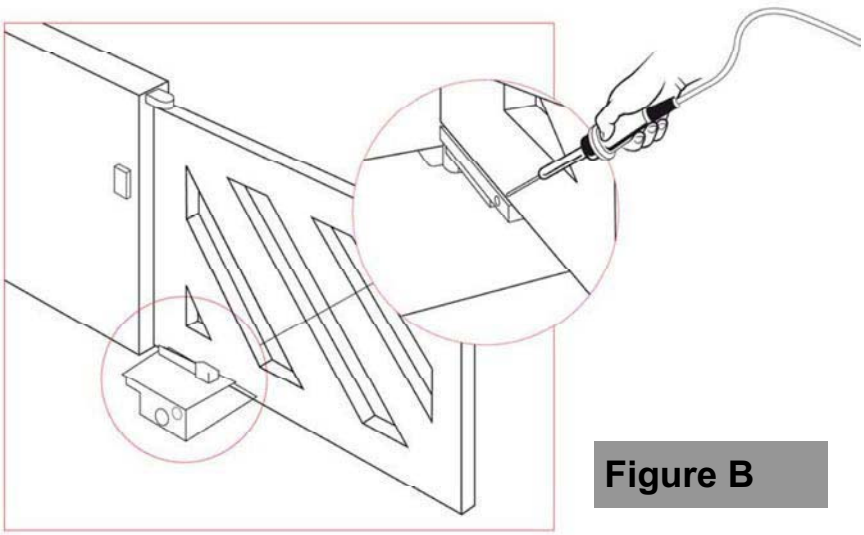


Figure B

- The opening angle of the gate has an important influence on the position of the foundation box;
- The foundation box must be set in concrete. Piping for electrical wiring and drainage should be borne in mind during this operation;
- The top of the foundation box should be slightly higher than surrounding concrete.

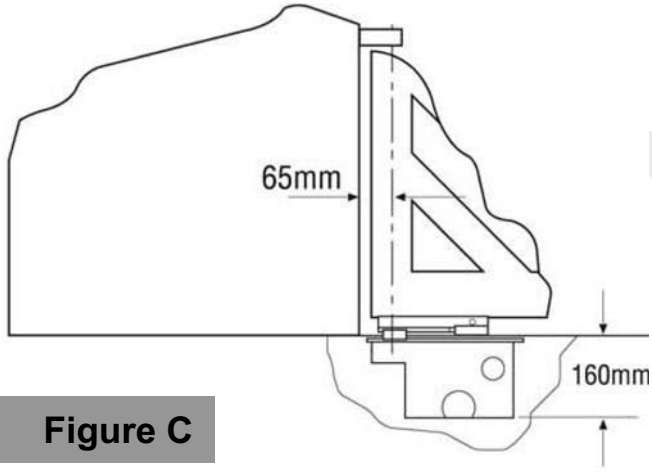


Figure C

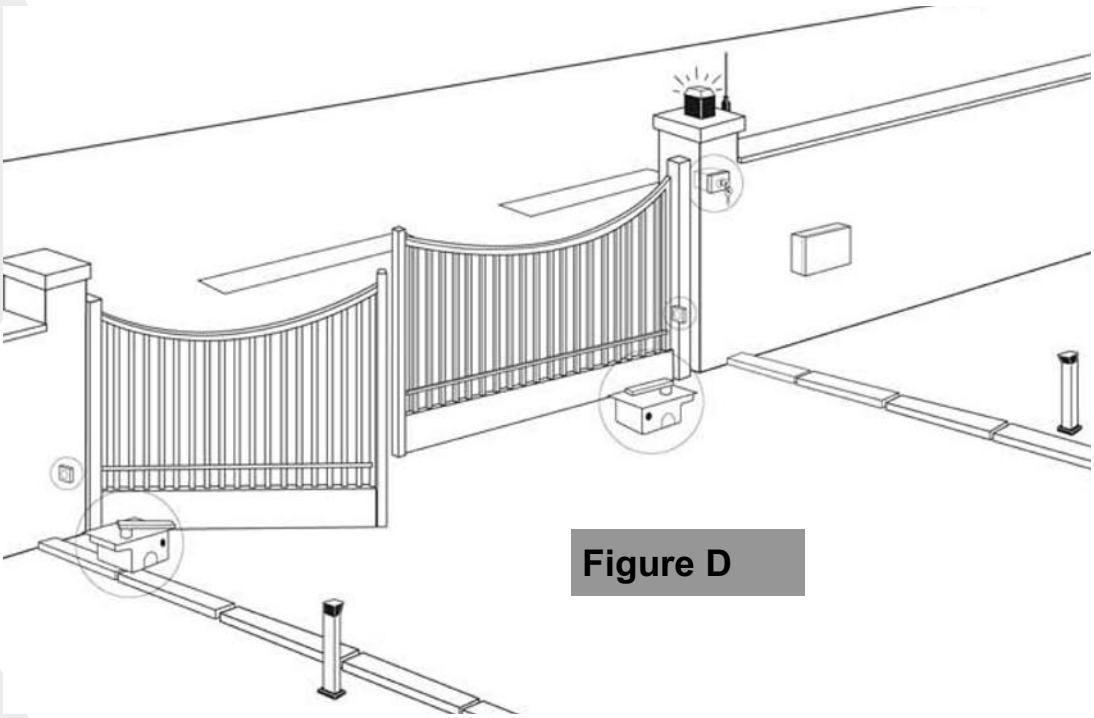
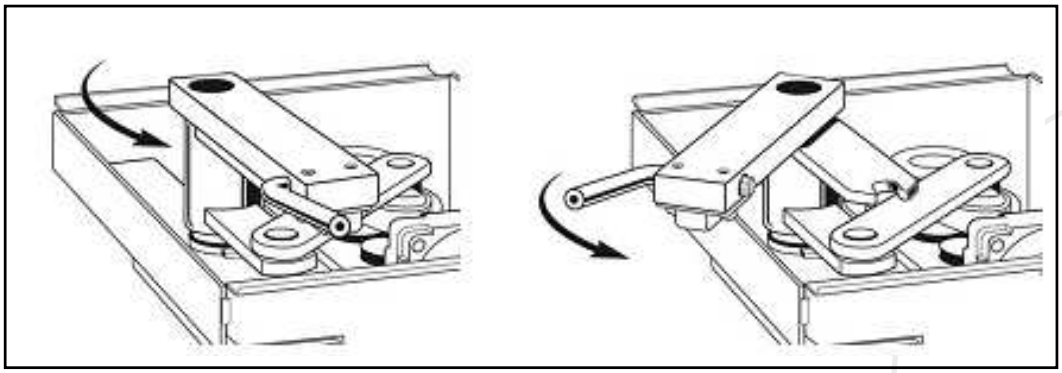


Figure D

– The manual release device support must be welded onto the leaf now. Turning the key in the apposite hole the system switches to manual operation so that the gate can be opened by hand if necessary. (Figure E)

Figure E



– Gate knockers must be mounted on ground to limit the movement of the gate. (Figure F)

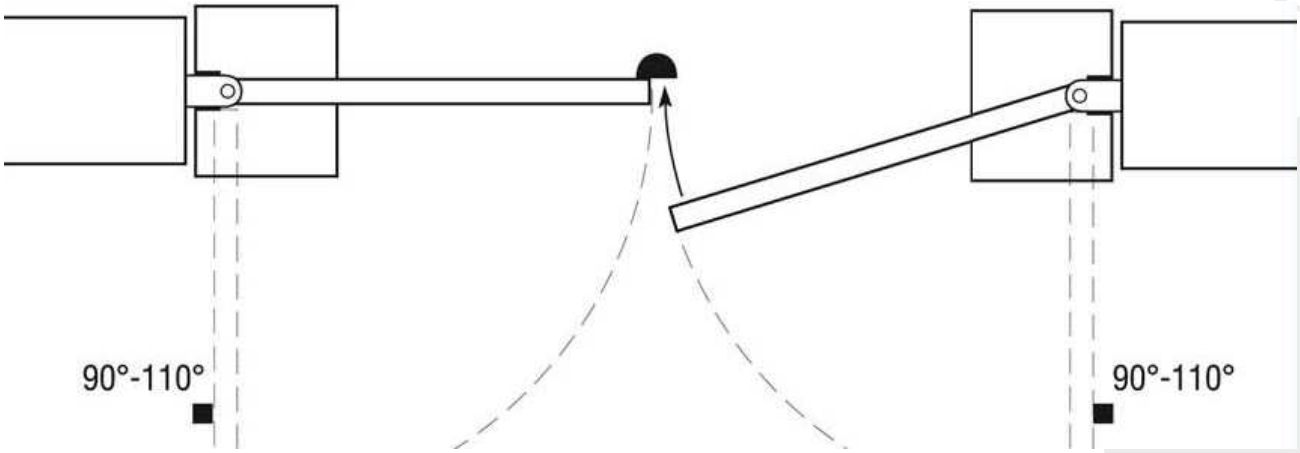


Figure F

DRAINAGE PIT

If the drainage of the installation cannot be connected up to the main drains, it may be possible to use a drainage pit. The floor must be permeable by water, and the cover of the foundation box should be protected against heavy rainfall or surface water with sealant silicon. The drainage pit should be dug out so as to be appreciably lower than the bottom of the foundation box, and its capacity should exceed the one of the foundation box. The pit should be filled with course ruble or gravel, an should be tiled to keep out sediment and water from the top and sides. Facilities should be provided for leading any water getting into the foundation box to the drainage pit.

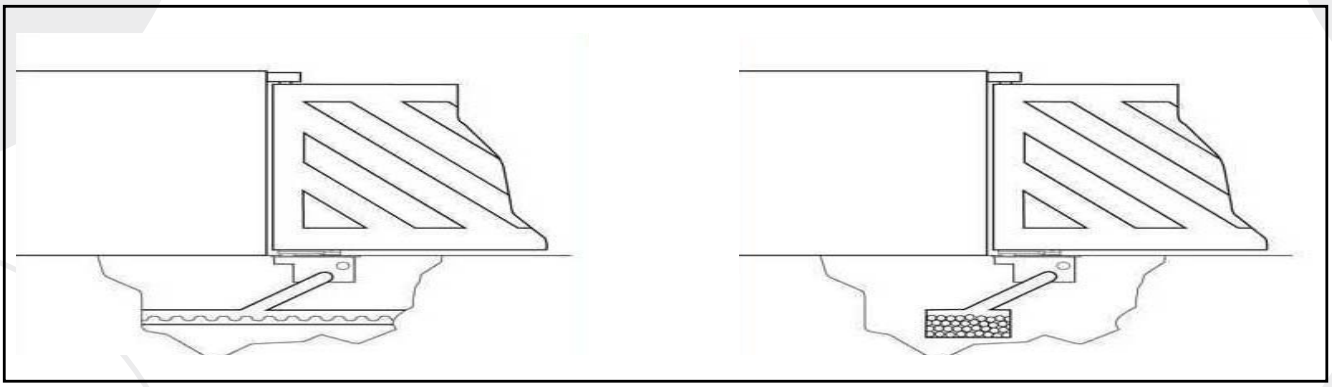
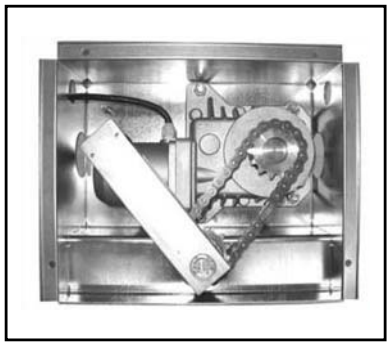


Figure G

Cable function:

COMMON = BLUE
L1 = BLACK
L2 = BROWN
GROUND = YELLOW / GREEN

Do not forget to check the earth system.
The condenser has to be connected between L1 and L2 (BLACK and BROWN) and has to be protected against water.



MOUNTING THE MECHANICAL LIMIT SWITCHES (QK-FCKIT)

- MOUNTING THE MECHANICAL LIMIT SWITCH FOR CLOSING: Proceed as displayed within FIGURE H paying attention not to screw the limit switch completely up so to allow a little movement;

Figure H

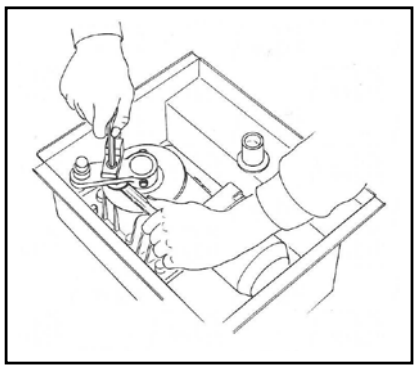


Figure I

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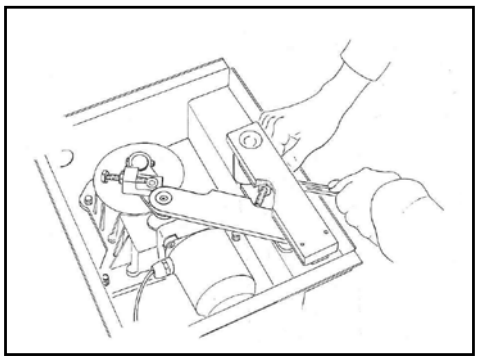


ADJUSTING THE MECHANICAL LIMIT SWITCHES

Mechanical limit switches have to be adjusted once the motors have been connected to the control unit and located in the final position. Screw the apposite screws when the leaf is on position.

GENERAL ADVICE

Install a gate's safety system that complies with current regulations. Choose short routes for cables and keep power cables separate from control ones. Install the control card in a waterproof box.
Please refer to current regulations when setting the gear motor's maximum torque.
We advice you to install an outdoor switch, in compliance with European standards on the issue of safety, to turn the electricity off when servicing the gate.
Check that each single installed device is efficient and effective.
Affix easily readable signs warning about the presence of a motorized gate.

USE

It is absolutely forbidden to use the device for any other purposes. The installed electronic unit (which must have built-in electric friction), allows to select the following functions:

automatic: one control impulse will open or close the gate;
semi-automatic: one control impulse will open or close the gate.

In case of blackout, act on the manual unlocking device and move manually the gate. Remember that this is an automatic device powered by electricity, consequently use with care. In particular, remember:

- not to touch the device with wet hands and/or wet or bare feet;
- to turn off electricity before opening the control box and/or actuator;
- not to pull the lead to pull the plug out;
- to put the gate in movement only when it is completely visible;
- to keep out of the gate's range of action if it is moving. Wait until it has stopped;
- not to let children or animals play near the gate;
- not to let children use the remote control or other operating devices;
- to carry out routine maintenance;
- in case of failure, to turn off electricity and operate the gate manually only if it is possible and safe. Refrain from touching the gate and call an authorized technician.

MAINTENANCE

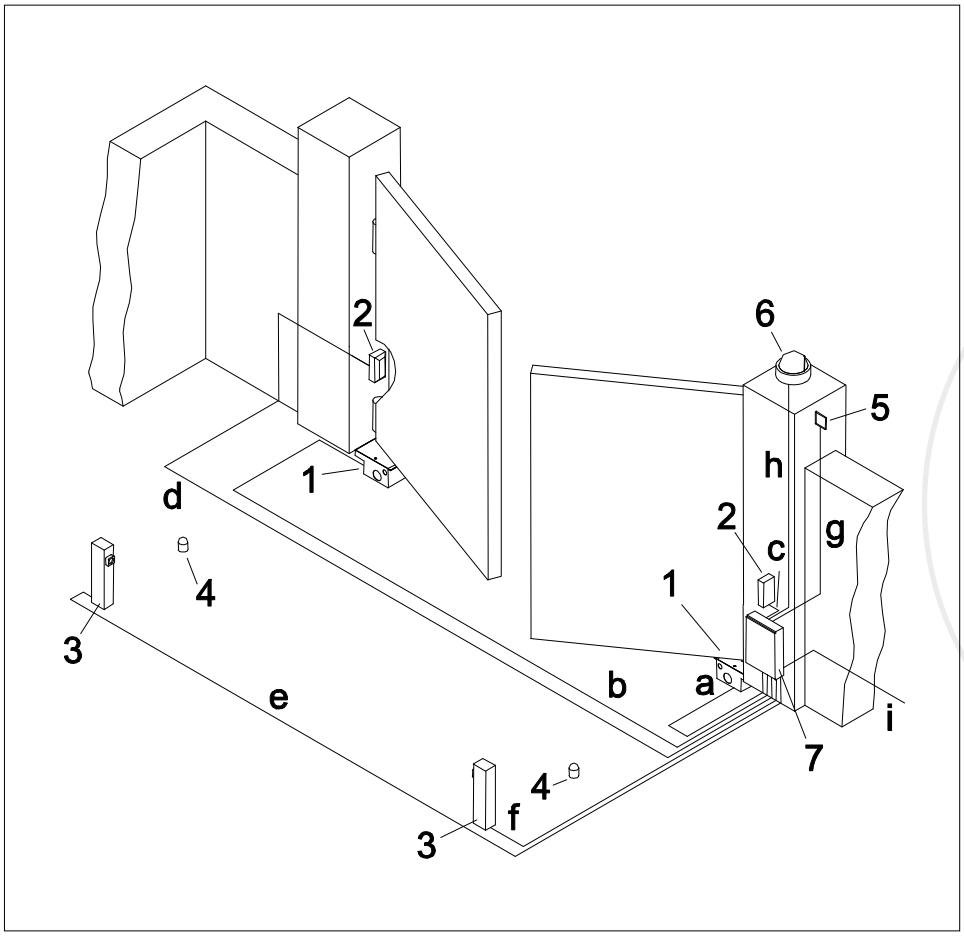
Actuators need very little maintenance; however their function depends also on the gate conditions, hence here are operations to be done to keep the gate efficient at all times.
Warning: no one but the maintenance man, who must be a specialized technician, must be able to control the automatic gate while it is being serviced. For this reason please turn off electricity, avoiding also electric shocks hazard. If on the contrary electricity must be on for certain checks, remember to check or disable any control device (remote controls, push button panels etc.) except the one used by the service man.

Routine maintenance
Each of the following operations must be done when needed and in all cases at least every 6 months:

1) Mechanical maintenance
- Lubricate (with oilier) the hinges on which the gate swings;
- check the good conditions of brackets and motor's hinges;
- do an unlocking operation to be sure the mechanism is always efficient.

2) Electrical maintenance
- Check the proper working of the safety devices;
- check the electronic friction's efficacy;
- check the earth system's (differential's) efficacy. Try the differential switcher once a month by pushing the special test button on the switcher.

TYPICAL SYSTEM



MAIN COMPONENTS

1 – UNDERGROUND GEARMOTOR
2 – PHOTOCELLS
3 – PHOTOCELLS ON LITTLE COLUMNS
4 – GATE KNOCKERS
5 – KEY SELECTOR
6 – FLASHING LIGHT
7 – CONTROL UNIT

ELECTRICAL CABLES' CROSS SECTION

24V (QK-SUB24)	220V (QK-SUB220)
A = 2x1.5 mm^2	A = 4x1.5 mm^2
B = 2x1.5 mm^2	B = 4x1.5 mm^2
C = 4x0.5 mm^2 D = 2x0.5 mm^2 E = 2x0.5 mm^2 F = 4x0.5 mm^2 G = 3x0.5 mm^2 H = 3x1 mm^2 I = 3x1.5 (supply line)	

DECLARATION OF CONFORMITY

(OF THE MANUFACTURER)

Manufacturer: QUIKO ITALY SAS
Via Seccalegno, 19
36040 Sossano (VI)
Italia

hereby declares, under his liability, that the products:
QK-SUB24, QK-SUB220

are in compliance with the essential safety requirements of the regulations:

Electromagnetic Compatibility Directive 2004/108/EC
Low Voltage Directive 2006/95/EC
Machinery Directive 2006/42/EC

and their amendments and modifications, and with the regulations set forth by the National Legislative Body of the country in which the machinery is destined for use.

Sossano, 19/10/2011

Managing Director
Luca Borinato

DECLARATION OF CONFORMITY

(OF THE INSTALLER)

The undersigned:

_____

_____

in charge of the set-up, declares that the product:

Gate type:

_____

_____

are in compliance with the essential safety requirements of the regulations:

Electro magnetic Compatibility Directive 2004/108/EC

Low Voltage Directive 2006/95/EC

Machinery Directive 2006/42/EC

and also declares that the related and/or specific national technical regulations have been followed:

EN 12453/EN 12445 on Industrial, Commercial and Residential Gates and Doors – Safe Use of Motorized Doors – Requirements and Classification – Test Methods;
EN 12604/ EN 12605 on Industrial, Commercial and Residential Gates and Doors – Mechanical Aspects – Requirements and Classification – Test Methods;
CEI 64/8 Electrical Systems Using Nominal Tension Not Higher Than 1000V a.c. and 1500 V d.c.;
EN 13241-1 (Industrial, commercial and garage doors and gates), conformity evaluation (6.3).

Notes:

Place and date: ……

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