

STRABUC

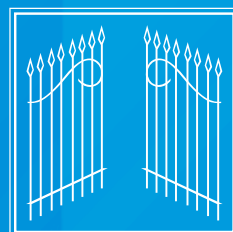
918

➤ RISING BOLLARD



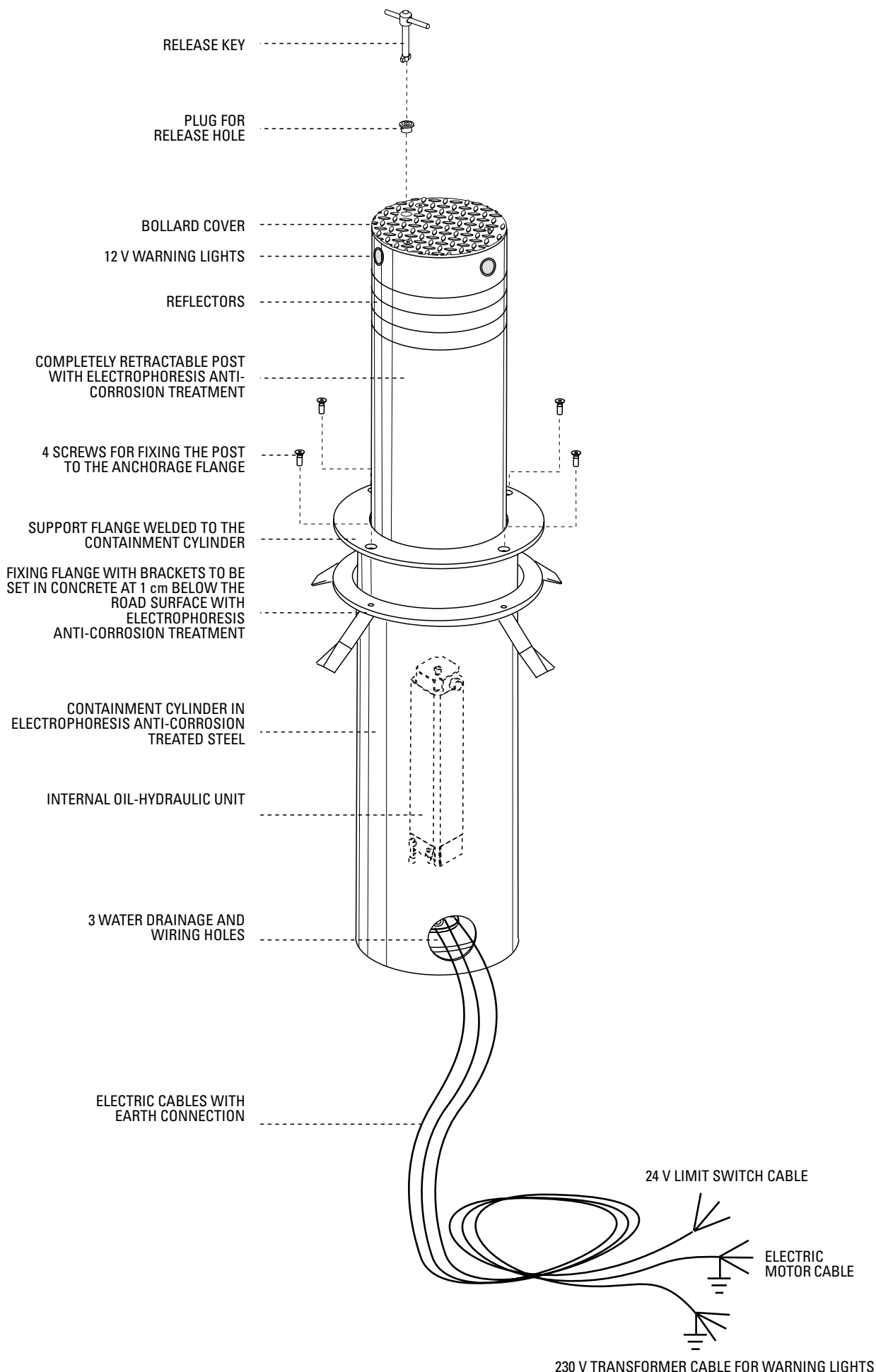
INSTRUCTIONS MANUAL

GB



FADINI[®]
the gate opener

STRABUC 918



AUTOMATION INSTALLATION INSTRUCTIONS

FOR THE STRABUC 918 TO BE INSTALLED AND OPERATE CORRECTLY, WE RECOMMEND TO FOLLOW THE INSTRUCTIONS AND RELATIVE ILLUSTRATIONS BELOW.

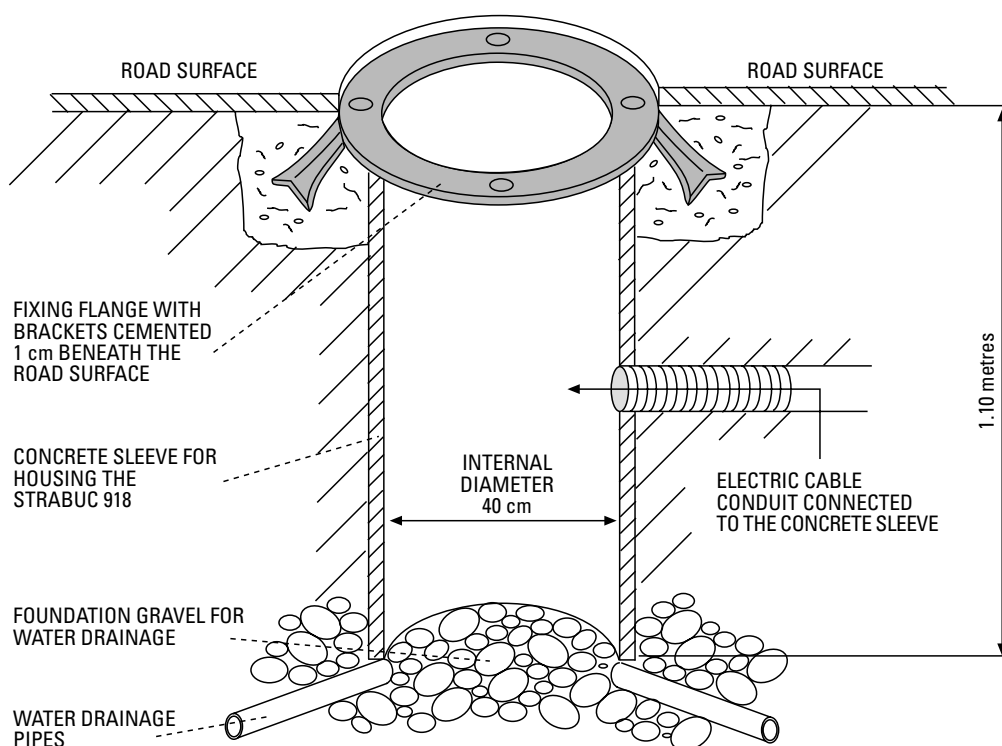
The Strabuc 918 is an oil-hydraulic traffic bollard which retracts completely down to the level of the road surface. It is designed to prevent vehicles from passing, but can also be completely retracted without leaving the slightest trace.

It is an oil-hydraulic automation with an incorporated internal hydraulic unit, while its control programmer, Elpro 10 CEI is installed externally, in a sheltered area.

In order to install the Strabuc 918, it is necessary to dig a containment hole and lay an underground conduit for the electric cables.

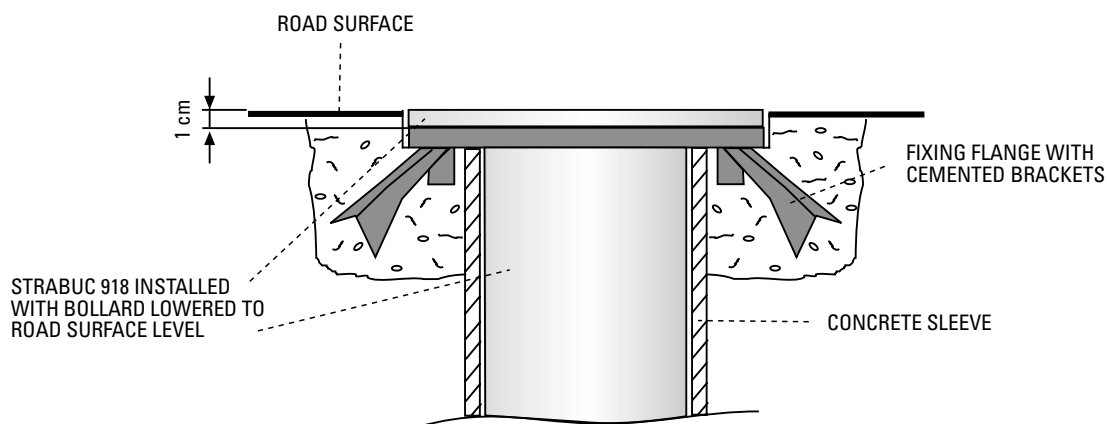
INSTALLATION OF THE FIXING FLANGE AND THE CONCRETE CONTAINMENT SLEEVE

- Dig a hole so as to insert a **concrete tube** beneath the road following the measurements shown in Pic. 1 (make sure that the hole **does not cut into the water table or damage other pipes**). You should also dig a lateral hole for the insertion of a conduit for the electric cables to be connected to the electronic programmer (to be installed in a dry place).
- The **concrete sleeve** should enable rainwater to drain away through the base, we therefore recommend gravel foundations.
- The **fixing flange** should be cemented into position at **1 cm beneath the road surface** (Pic. 2), above the concrete sleeve, so as to allow the Strabuc 918 **rising bollard** installed inside the **concrete sleeve** to be on a level with the road surface when re-entering the **containment cylinder**.



PIC. 1

CROSS-SECTION OF STRABUC 918 INSTALLATION



PIC. 2

CROSS-SECTION OF CONCRETE SLEEVE WITH STRABUC 918 INSTALLED

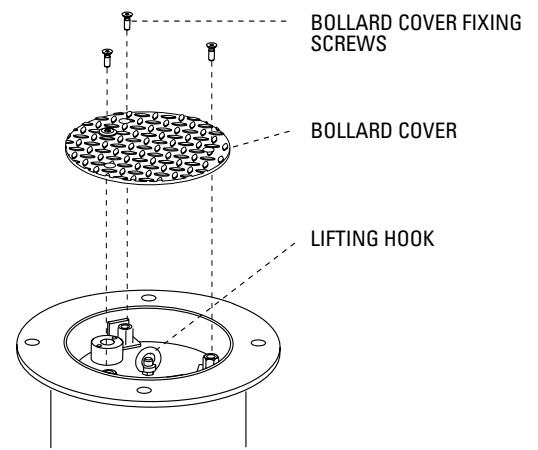
PLACING THE STRABUC 918 INTO THE CONCRETE SLEEVE AND PASSING THE ELECTRIC CABLES THROUGH THE CONDUIT

Once the **fixing flange** has been cemented into position, the Strabuc 918 can be placed into the **cement sleeve** as it is already ready for use.

- Open the rising **bollard cover** by unscrewing the three screws (Pic. 3), thereby uncovering the top of the rising bollard.
- Attach a winch to the Strabuc 918 **lifting hook** and lift the entire bollard, positioning it above the concrete sleeve (Pic. 4)
- Place the electrical cables inside the conduit, letting them rest freely on the conduit floor (Pic. 4)
- Place the Strabuc 918 inside the **concrete sleeve**, accompanying the electrical cables at the same time without tugging or cutting them.
- Attach the Strabuc 918 to the **fixing flange** using the four **fixture screws**
- Close the rising **bollard cover**, screwing the three screws into place.

WARNING: After the installation has been completed, there should be at least 30 cm of space between the hole foundation and the bottom of the Strabuc 918 bollard (Pic. 4).

1 – REMOVE THE COVER BY UNSCREWING THE 3 SCREWS



PIC. 3

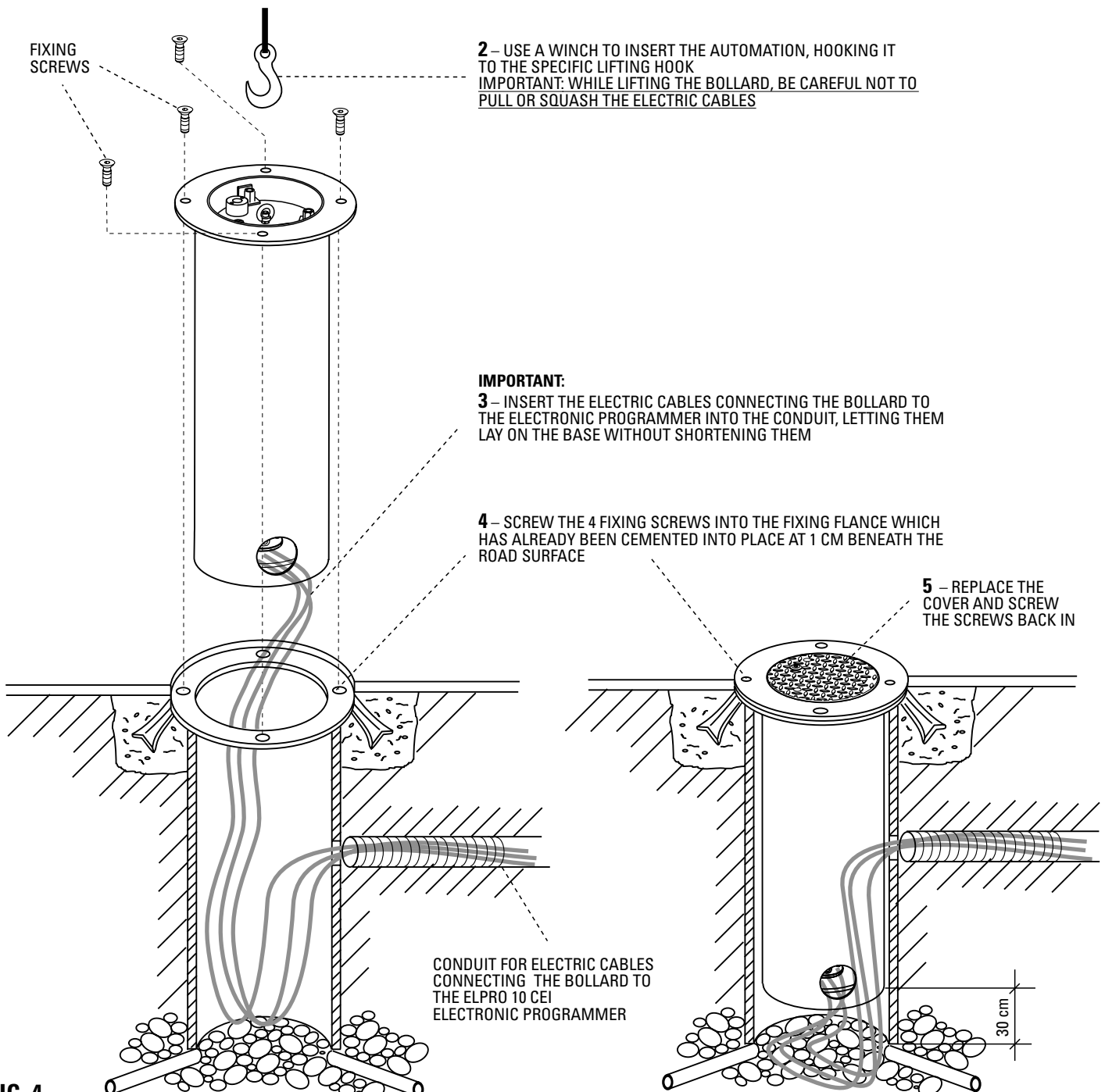
2 – USE A WINCH TO INSERT THE AUTOMATION, HOOKING IT TO THE SPECIFIC LIFTING HOOK
IMPORTANT: WHILE LIFTING THE BOLLARD, BE CAREFUL NOT TO PULL OR SQUASH THE ELECTRIC CABLES

IMPORTANT:

3 – INSERT THE ELECTRIC CABLES CONNECTING THE BOLLARD TO THE ELECTRONIC PROGRAMMER INTO THE CONDUIT, LETTING THEM LAY ON THE BASE WITHOUT SHORTENING THEM

4 – SCREW THE 4 FIXING SCREWS INTO THE FIXING FLANGE WHICH HAS ALREADY BEEN CEMENTED INTO PLACE AT 1 CM BENEATH THE ROAD SURFACE

5 – REPLACE THE COVER AND SCREW THE SCREWS BACK IN



PIC. 4

STRABUC 918 INSERTION INTO THE CONCRETE SLEEVE

ELECTRICAL CONNECTIONS TO ELPRO 10 CEI PROGRAMMER

ALL CONNECTIONS INSIDE THE STRABUC 918 BOLLARD (ELECTRIC MOTOR, LIMIT SWITCH AND WARNING LIGHTS) HAVE ALREADY BEEN MADE.

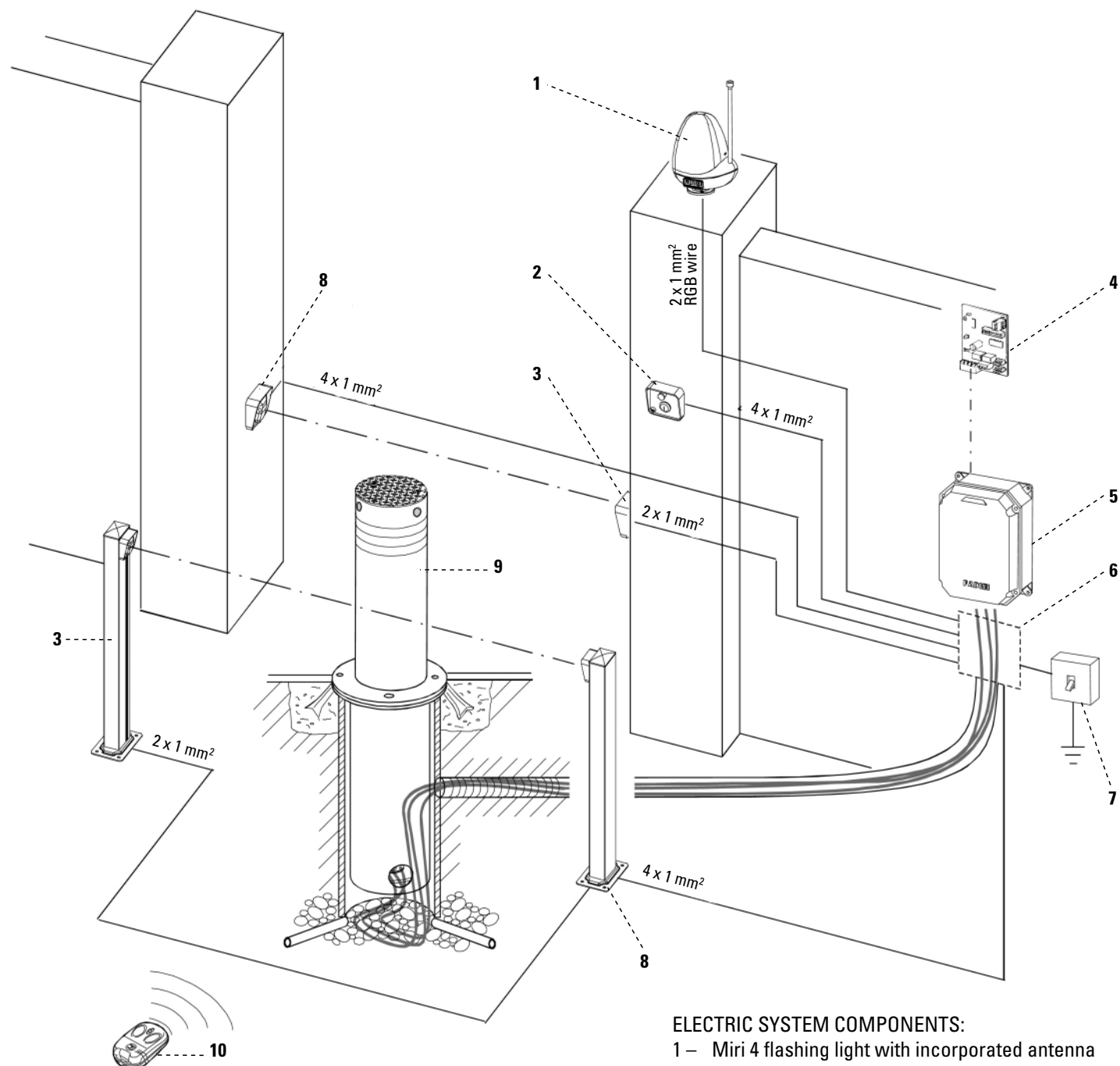
IMPORTANT: all the electrical connections and wiring (Pic. 5) must respect good installation practice and be installed professionally by qualified personnel, in compliance with the current Machinery Directive 98/37/EC safety standards, carrying out a complete risk analysis and adopting suitable safety measures.

- The **Elpro 10 CEI** programmer should be installed in a dry, sheltered place.

- The Elpro 10 CEI programmer should be **powered** by electric wires with a section of 1.5 mm^2 , for a maximum distance of 50 metres. For distances of over 50 metres, we recommend using electric wires with a section of 2 mm^2 .

- Electric wires with a section of 1 mm^2 can be used to power **photocells, pushbuttons, keyswitches and accessories**.

IMPORTANT: before connecting the electricity supply, switch the voltage change switch to 230 V (Pic. 8).



ELECTRICAL CONNECTIONS DIAGRAM

ELECTRIC SYSTEM COMPONENTS:

- 1 – Miri 4 flashing light with incorporated antenna
- 2 – Prit 19 keyswitches
- 3 – Polo 44 photocell transmitter
- 4 – Astro 43 plug-in card
- 5 – Elpro 10 CEI electronic programmer
- 6 – Electric cable shunt box
- 7 – Differential magneto-thermal mains switch
- 8 – Polo 44 photocell receiver
- 9 – Strabuc 918 rising bollard
- 10 – Small Astro 43 remote control

RELEASE OPERATION FOR MANUALLY LOWERING THE BOLLARD

This operation is generally referred to as the “Manual Release” operation and involves manually lowering the rising bollard by using a specially moulded key if the Strabuc 918’s power supply happens to be cut off.

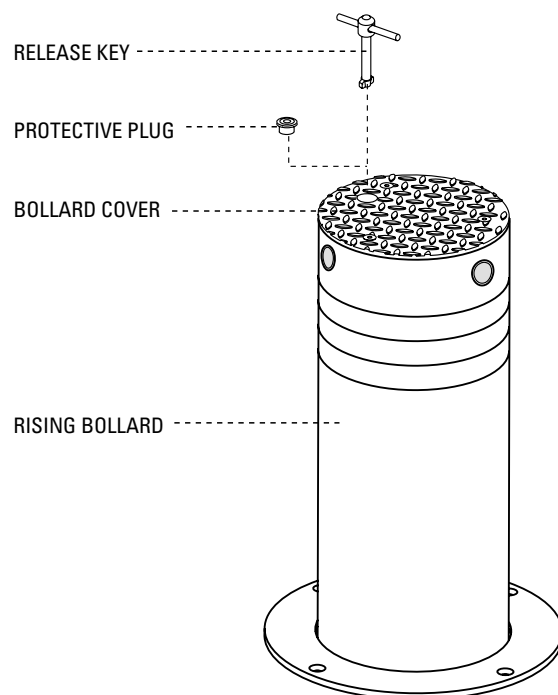
Warning: This operation only enables the bollard to be lowered and cannot be used to make it rise.

- 1 - Use a hexagonal key to unscrew the **protective plug** placed in the **bollard cover** (Pic. 6)
- 2 - Insert the **release key** into the lock inside the **bollard cover** hole
- 3 - Turn the **release key** anti-clockwise, thus making the bollard slowly descend to ground level.

DESCRIPTION OF ELECTRICAL WIRING CONNECTIONS IN THE STRABUC 918

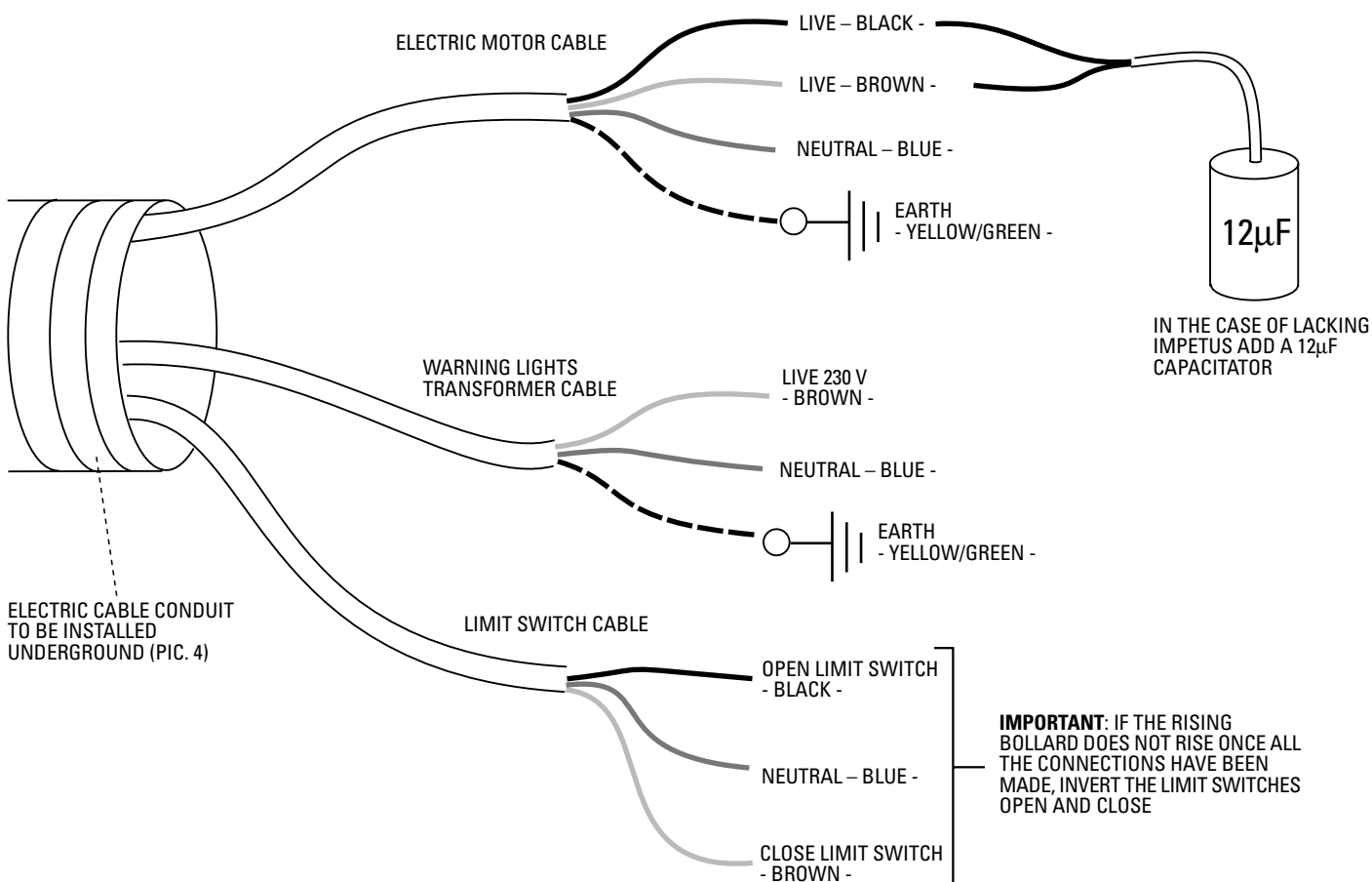
The Strabuc 918 comes supplied with three electric cables, 10 metres long: a 230 V 50 Hz power supply cable, an electrical limit switch cable and an electrical transformer cable for the warning lights.

The connections are only made to the Elpro 10 CEI programmer as illustrated in diagrams in Pic. 7 and Pic. 8.



PIC. 6

ALL STRABUC 918 CABLES CAN BE IDENTIFIED BY THEIR IDENTIFICATION LABELS.



PIC. 7

26
27
28

TERMINALS FOR THE CONNECTION OF THE PUSH BUTTONS PULIN 3

VOLTAGE CHANGE-OVER SWITCH

400 V 230 V

1 AMP.
FUSE: 24 V OUTPUT
TERMINALS 12 - 13

PEDESTRIAN OPENING
CARD CONNECTOR PP

DWELL TIME

MOTOR RUN
TIME OPEN & CLOSE

OPEN LINE

630 mA FUSE
LOGIC

CLOSE

5 A FUSE
HIGH
VOLTAGE

CUT OFF SWITCH
BY COVER KNOB

630 mA FUSE
FLASHING LAMP

EARTH

N. W.: for special applications, ie. to switch on lights - CCTV etc..., SOLID STATE RELAYS are recommended to be used only. Standard relays would affect the micro-processor.

N.W.: THIS PANEL IS TESTED TO OPERATE GATES ONLY THROUGH FADINI ACCESSORIES. NO GUARANTEE FOR ACCESSORIES OF OTHER MAKE OR SPECIAL APPLICATIONS.

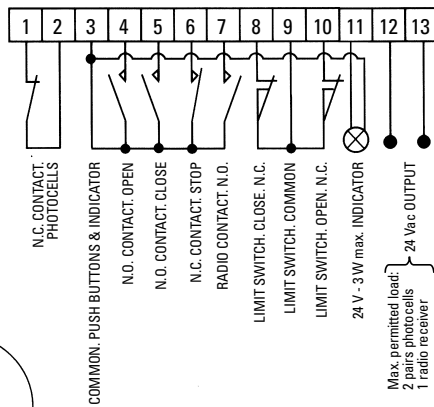
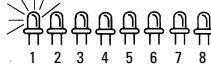
24 V OUTPUT
1° CHANNEL

RADIO CONTROL
PLUG-IN CARD SUPPORT

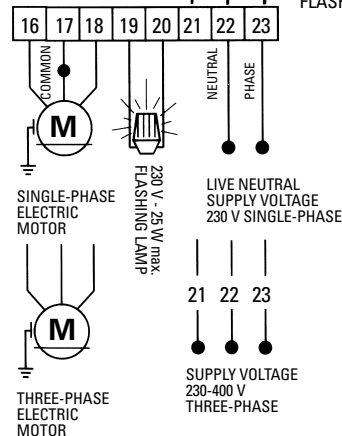
MICROPROCESSOR



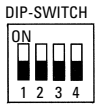
POWERED CARD



Should more pairs of photocells be required than the recommended quantity, fit an auxiliary transformer outside the control box.



B



ON - PHOTOCELLS OFF DURING OPENING
ON - REMOTE CONTROL DOES NOT INVERT
ON - CLOSURES AUTOMATICALLY
ON - WITHOUT PRE-FLASHING

N.B.: for inverse operations, turn the DIP-SWITCH levers to the OFF position.

PIC. 8

DESCRIPTION OF INDIVIDUAL GATE ELECTRONIC PROGRAMMER OPERATION FOR SLIDING GATES

Make sure that all the electrical connections comply with the diagram enclosed. Once terminals 21, 22 and 23 are supplied with single-phase 230 V – 50 Hz power, the “red LED” No. 1 should light up, indicating that the card is powered. The OPEN and CLOSE operation timer should be greater than the gate stroke. The PAUSE timer should be adjusted to fit requirements.

PROGRAMMER OPERATION LOGIC: following impulse, the warning light comes on and the automation comes into operation after three seconds. The warning light continues to flash during the pause; the flashing light functions for a further three seconds when the gate is closed. In order to deactivate the flashing light before opening (pre-flashing), use DIP-SWITCH “B” position 4.

SIGNAL LEDs:

- LED No. 1: lights up when the card is powered.
- LED No. 2: “Photocells” normally lit up. Only switches off when an obstacle is placed between the photocells.
- LED No. 3: “Open”, lights up when the relative button is pressed.
- LED No. 4: “Close”, lights up when the relative button is pressed.
- LED No. 5: “Stop” normally lit up. Switches off if the relative button is pressed.
- LED No. 6: “Closure limit” switches off when the gate is completely closed.
- LED No. 7: “Open limit” switches off when the gate is completely open.
- LED No. 8: “Radio” lights up whenever an impulse is received from the remote control or pushbuttons.

CONNECTION WARNINGS:

- 1) The programmer should be installed in a dry, sheltered place. If it is installed outside, it will require a protective box to protect it from the elements.
- 2) The whole system should be earthed.
- 3) If the photocells are not used, create a bridge between terminals 1 and 2.
- 4) In order to install two pairs of photocells the connections should be made in series with the 1 – 2 contact normally closed; if installed one next to the other they should be crossed in pairs i.e. transmitter next to the receiver of the next pair.
- 5) If no pushbuttons are used, create a bridge between terminals 3 and 6.
- 6) Before the programmer, apply a high-sensitivity 0.03 Amp differential magneto-thermal switch.
- 7) For single-phase motors use cables of at least 1.5 mm².
- 8) The 24 V~ output to terminals 12 – 13 is able to power 2 pairs of photocells plus 1 radio receiver. An auxiliary transformer placed outside the programmer should be used in the case of more than two pairs of photocells or more radio receivers.
- 9) Terminal No. 11 indicator light output is able to cater for max. 24 V – 3 W bulb; terminals No. 19-20 flashing light output maximum absolute power 25 W.

SETTING DIP-SWITCH “B”



- 1 - ON: PHOTOCELLS OFF DURING OPENING
OFF: PHOTOCELLS INVERT MOTION DURING OPENING
- 2 - ON: REMOTE CONTROL DOES NOT INVERT
OFF: REMOTE CONTROL INVERTS
- 3 - ON: AUTOMATIC CLOSURE
OFF: SEMIAUTOMATIC CLOSURE
- 4 - ON: WITHOUT PRE-FLASHING
OFF: WITH PRE-FLASHING

TECHNICAL DATA

HYDRAULIC UNIT

Hydraulic pump.....	P10
Hydraulic pump capacity.....	4.45 l/min.
Average working pressure.....	2 MPa (20 bar)
Maximum supplied pump pressure.....	4 MPa (40 bar)
Working temperature.....	-20°C +80°C
Hydraulic oil type.....	OIL FADINI A15 by AGIP
Static weight of the pump assembly.....	10 Kg
Protection standards.....	IP 54

OIL-HYDRAULIC PISTON

Piston stroke time.....	6 sec.
Useful piston stroke.....	740 mm
Rod diameter.....	16 mm
Piston diameter.....	30 mm
Max. traction force during opening.....	276 Kg
Max. thrust during closure.....	147 Kg
STRABUC 918 total weight.....	128 Kg
Full protection standards.....	IP 557
Flashing light power supply.....	230 V - 25 W

ELECTRIC MOTOR

Power yielded.....	0.25 KW (0.33 HP)
Power supply voltage / Frequency.....	230 V - 50 Hz
Absorbed current.....	1.8 A
Absorbed power.....	330 W
Capacitor.....	12.5 µF
Motor rotation speed.....	2'800 revs/min.
Duty mode.....	S 3

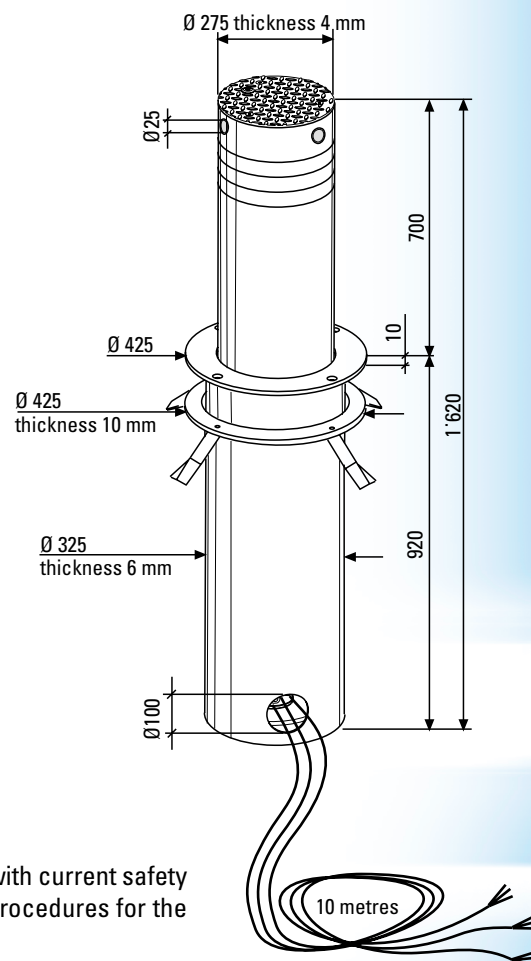
PERFORMANCE

Duty cycle.....	6 s Opening - 30 s Pause - 6 s Closing
Complete cycle time.....	42 seconds
Complete Opening - Pause - Closing cycles.....	85/hour
Annual cycles (with 8 hours of use per day).....	Nr. 250'000

INSPECTIONS AND MAINTENANCE

In order to ensure optimal system performance over time and so as to comply with current safety standards, it is necessary to follow the correct maintenance and monitoring procedures for the entire automation, electronic devices and wiring:

- Oil-hydraulic automation: maintenance inspection around every 6 months
- Electronic devices and safety systems: maintenance inspection monthly.



WARNINGS

- Perform a Risk Analysis before every installation and resolve risks through the use of safety devices in compliance with EN 12445 and EN 12453 safety standards
- Follow the instructions provided
- Check that the information on the electric motor plate conforms to the distribution network
- Dispose of all cardboard, nylon, polystyrene and other packaging with specialized waste disposal firms
- If removing the actuator, **do not cut** the electric wires, but disconnect them from the terminal box by loosening the screws inside the shunt box
- Disconnect the mains switch before opening the electrical wire shunt box cover
- The whole automation should be earthed with the yellow/green wire
- CUSTOMER GUARANTEE CERTIFICATE ON CUSTOMER'S REQUEST.

We recommend reading the "warning" regulations, suggestions and observations in this booklet very carefully.

The "CE" mark certifies that the operator conforms to the essential requirements of the European Directive art. 10 EEC 73/23, in relation to the manufacturer's declaration for the supplied items, in compliance with the body of the regulations ISO 9000= UNI EN 29000. Automation in conformity to EN 12453, EN 12445 safety standard.



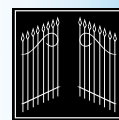
**EUROPEAN MARK CERTIFYING CONFORMITY
TO THE ESSENTIAL REQUIREMENTS OF THE
STANDARDS 98/37/EC**

- DECLARATION OF CONFORMITY
- GENERAL WARNINGS
- EN 12453, EN 12445 STANDARDS
- CEI EN 60204-1 STANDARDS
- WARRANTY CERTIFICATE ON THE CUSTOMER'S REQUEST

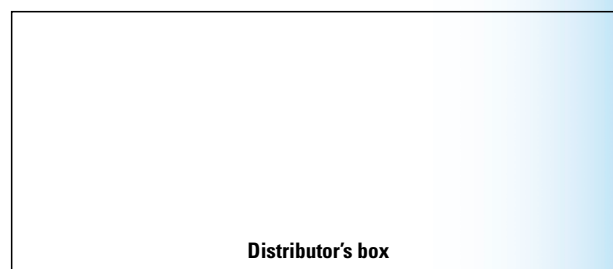


AUTOMATIC GATE MANUFACTURERS

The growth of MECCANICA FADINI has always been based on the development of guaranteed products thanks to our "TOTAL QUALITY CONTROL" system which ensures constant quality standards, updated knowledge of the European Standards and compliance with their requirements, in view of an ever increasing process of improvement.



FADINI
the gate opener
Made in Italy



Distributor's box

The manufacturers reserve the right to change the products without any previous notice