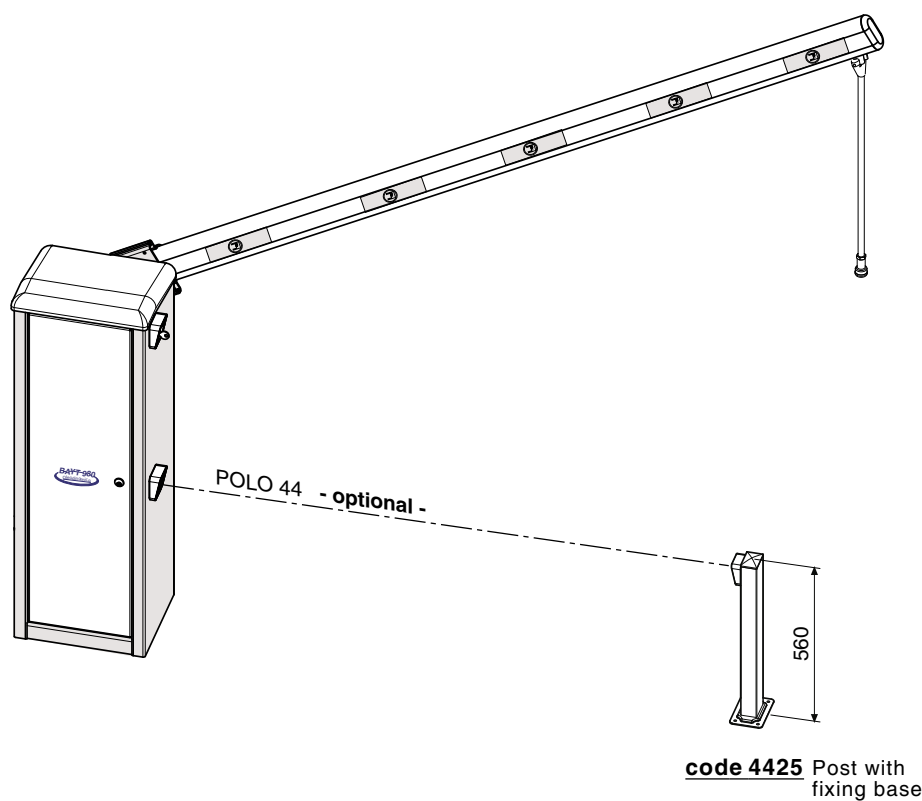


# BAYT 980

Oil-hydraulic

OIL-HYDRAULIC BARRIER  
FOR TRAFFIC CONTROL



CE



**FADINI**  
the gate opener  
Made in Italy

**INSTALLATION MANUAL**

GB

## INSTRUCTIONS FOR THE INSTALLATION OF THE TRAFFIC BARRIER

FOR A PERFECT APPLICATION AND CORRECT PERFORMANCE OF **BAYT 980** ITS IS RECOMMENDED TO KEEP TO THE INSTRUCTIONS AND DIAGRAMS IN THIS MANUAL  
**IMPORTANT:** THE COMPLETE INSTALLATION IS TO BE CARRIED OUT BY QUALIFIED TECHNICIANS IN COMPLIANCE WITH THE NORMS EN 12453- EN 12445, AND THE MACHINE DIRECTIVE 98/37/EC. A RISK ANALYSIS IS REQUIRED IN COMPLIANCE WITH THE EXISTING SAFETY NORMS.

### GENERAL FEATURES:

**"Bayt 980"** is an oil-hydraulic automation fitted with an aluminium beam to provide a moving barrier where traffic is required to be controlled or stopped from accesses, roads or properties, mainly industrial.

The mechanism is enclosed in a housing cabinet made of metal sheet, rust treated, paint finishing; a stainless steel option is available on request. It includes the hydraulic assembly, the return spring to balance the beam movements and the electronic control unit fitted inside a box. A power cut off switch is fitted to the door allowing safe access to the mechanism for maintenance or service.

Three versions are available, depending on the application requirements. A slow down device is incorporated in both up and down cycles of the beam, adjustable in the down cycle to decrease speed over the last degrees of the beam rotation.

The motor pump unit and the oil-hydraulic actuator are incorporated into a single, compact block.

### PRELIMINARY INSPECTIONS

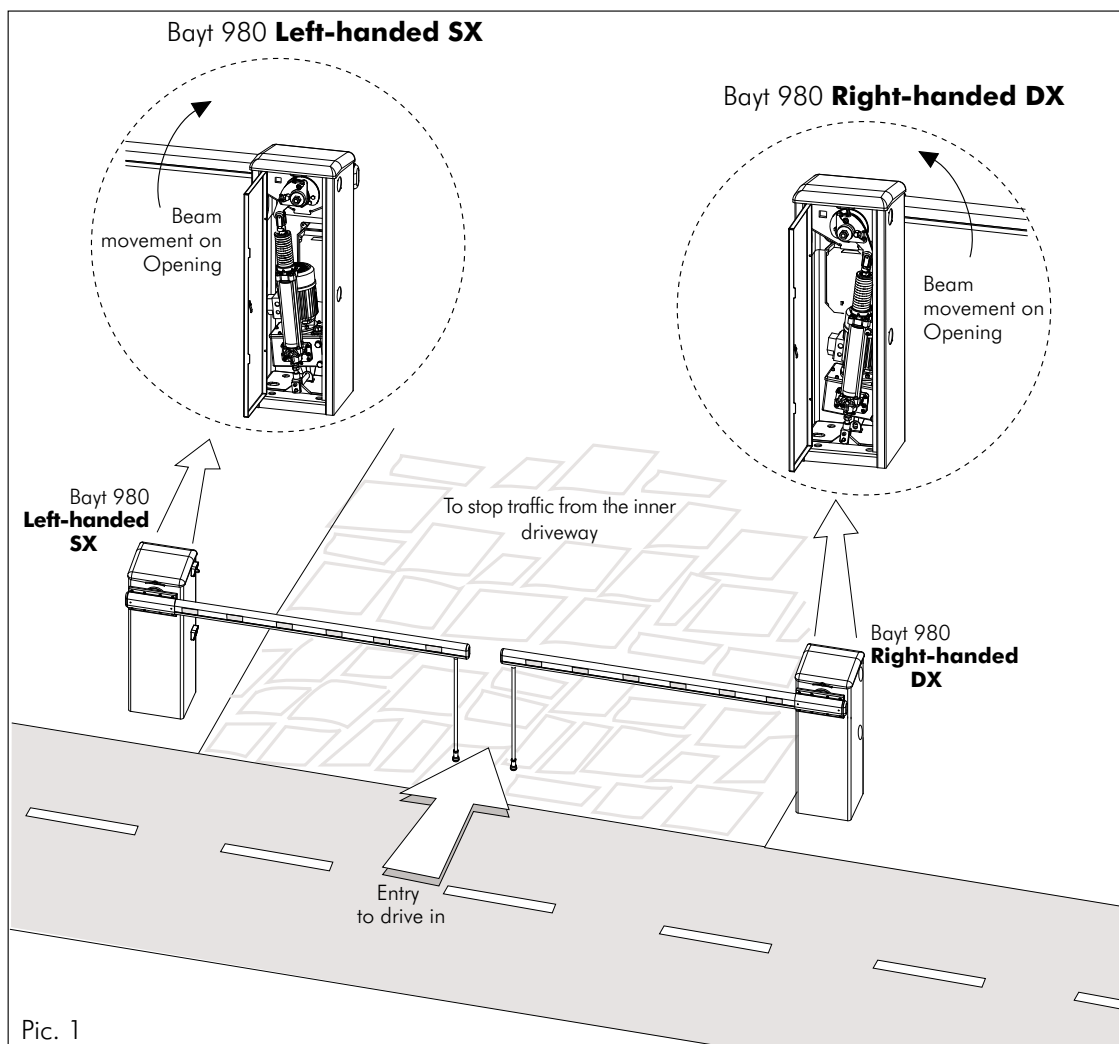
Before installing bayt 980 it is recommended to make sure that:

- The surface of the site is adequate to take the automation
- No obstacles interfere with the movements of the beam
- The excavation required to lay the electric cables of the automation does not run into underground services
- A Risk analysis is to be carried out as indicated in the book safety Norms. The installation must be in full compliance with the existing safety regulations.

## INSTALLATION OF THE BARRIER BAYT 980

### BAYT 980 RIGHT- AND LEFT-HAND UNITS: IDENTIFICATION

Bayt 980 is designed as a handed product. It can be right- or left-handed, viewed from outside: in both cases the inner configuration is such that the hydraulic actuator always pushes the beam to rise in the opening cycle (Pic.1)



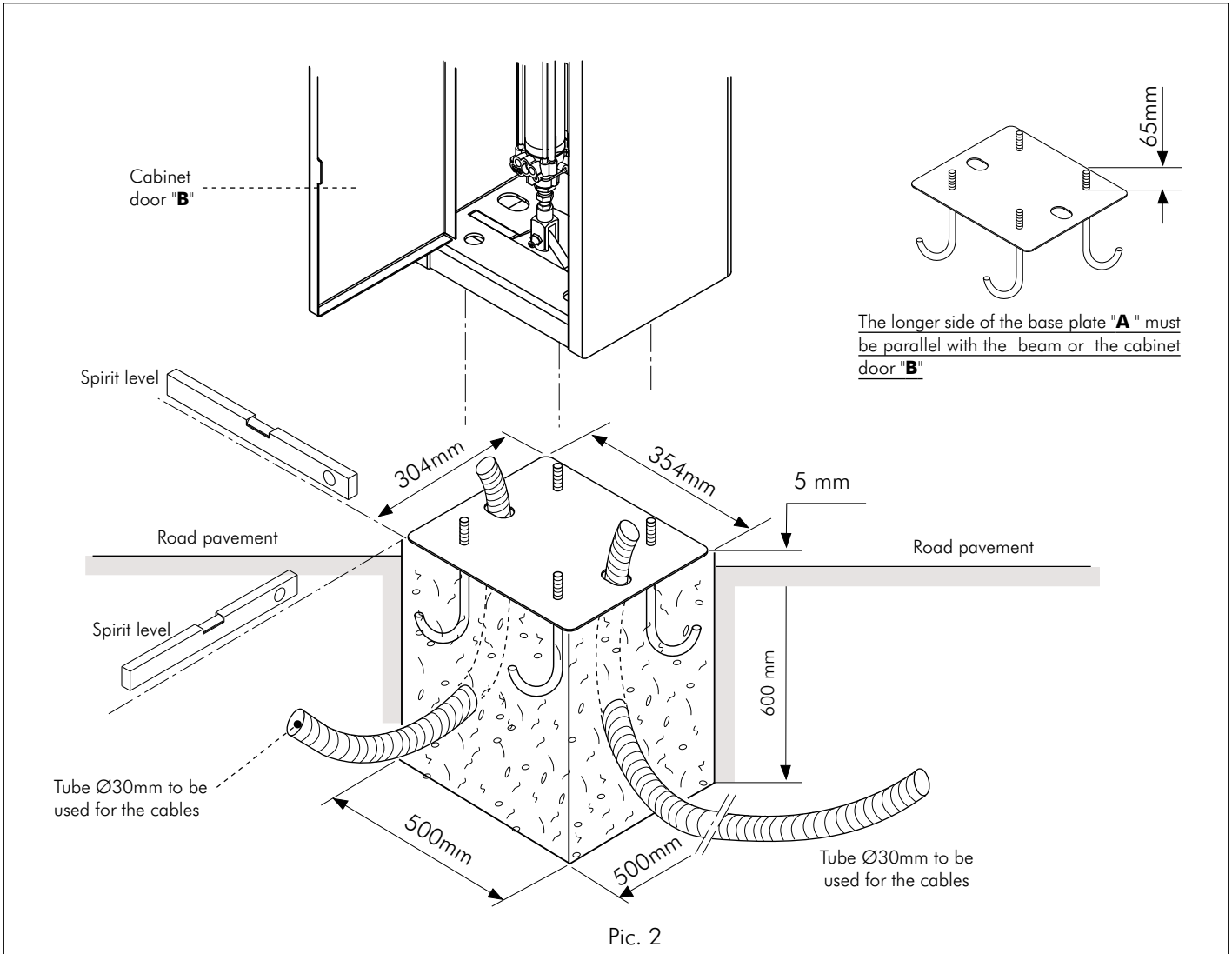
Pic. 1

## INSTALLATION OF THE FIXING BASE PLATE "A"

- The first operation is to set the **Fixing base plate "A"** (Pic 2), in a perfectly levelled concrete foundation. The longer side of the plate is where the door is fitted in the Bayt 980 housing. Before concreting, one or two tubes, having a diameter of 30 mm, are to be provided for the electric cables (mains supply, commanding and safety accessories) as required (Pic. 2).

**Important:** Before concreting the fixing base plate screw the four bolts in so that the threads protrude completely.

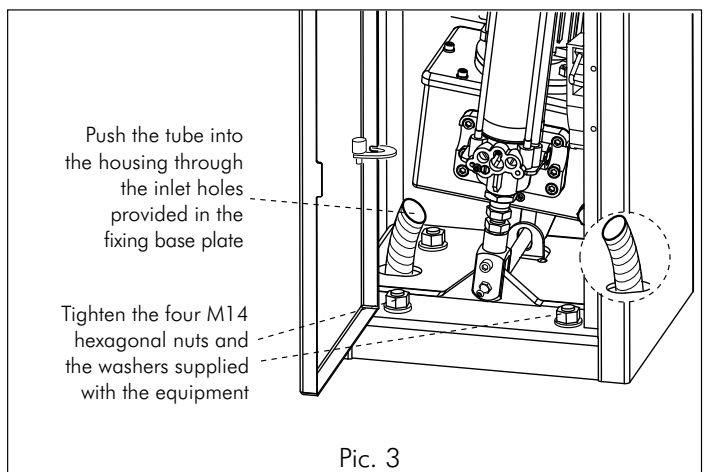
**Important:** The base plate is required to be perfectly levelled in both levels. This can be achieved with the help of a spirit level as in the picture and must be **di 5mm higher** than the road pavement level (Pic.2).



## MOUNTING THE HOUSING ON TO THE BASE PLATE "A"

Once the **Fixing Base Plate "A"** has firmly set in the concrete foundation, the **Housing** of Bayt 980 can be mounted on to it and fixed to the protruding bolts (Pic.3) by means of the four **M14 Hexagonal Nuts** and the respective **Washers** (Pic.3)

**IMPORTANT:** When mounting the housing on to the fixing base plate "A" make sure that the cable leading tube is properly fitted inside the housing.



## ELECTRICAL CONNECTIONS TO THE CONTROL PANEL ELPRO 10 PLUS

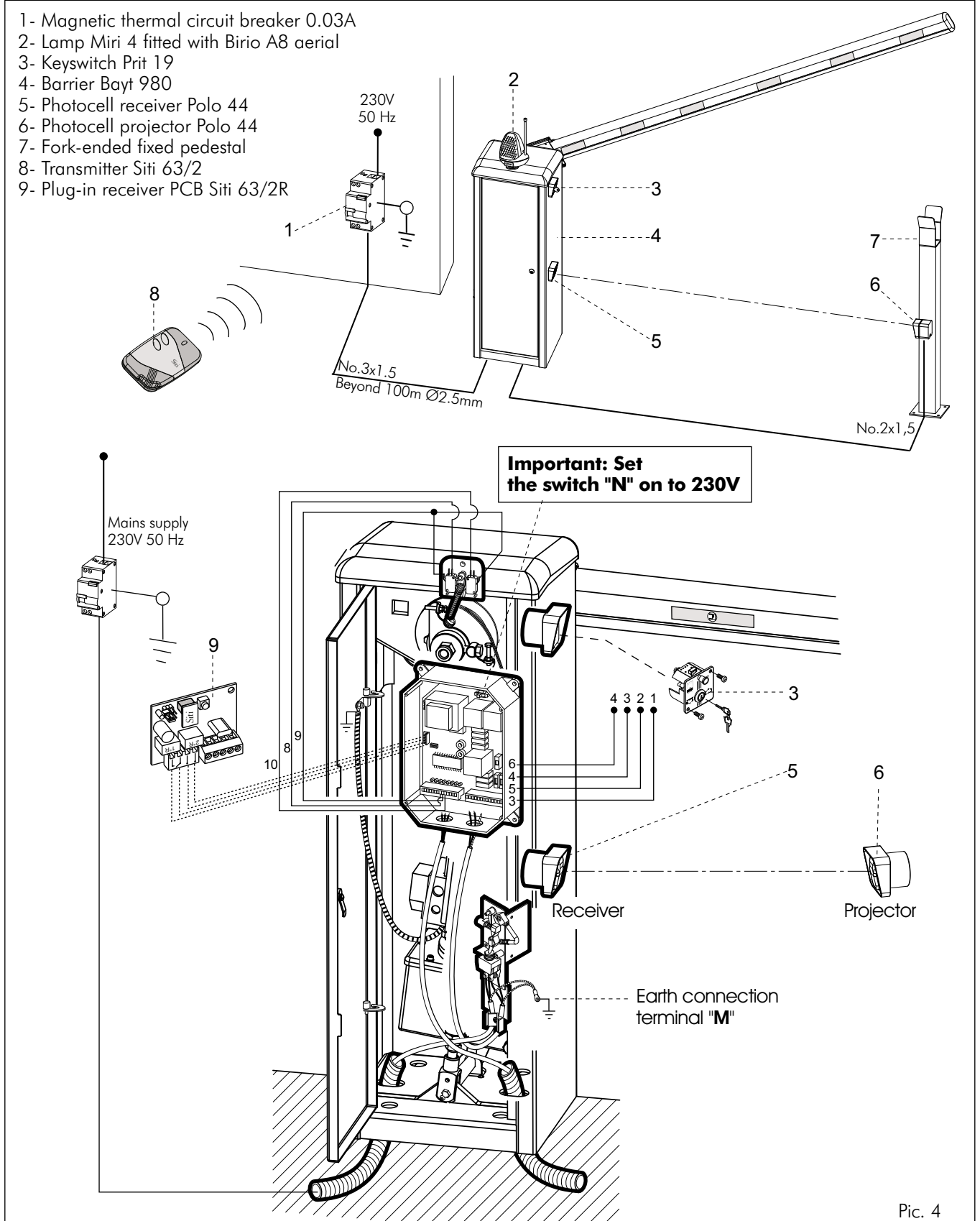
Before starting the electrical connections carefully read the electrical diagrams here enclosed (Pic.4, Pic.5 and Pic.6).

**IMPORTANT:** Do not forget to set the voltage switch on the Elpro 10 Plus PCB on to 230V.

- **Voltage supply, electric motor, lamp** : Use 1.5mm<sup>2</sup> section wires over distances of 50m maximum. For longer distances use electric wires having a suitable square section according to the rules of good technical installation. For all the external accessories to the control panel it is possible to use 1 mm<sup>2</sup> section wires.

- **Photocells, Push buttons, key-switches and accessories** : Use 1 mm<sup>2</sup> section wires.

**IMPORTANT:** Connect the whole installation to the earth terminal "**M**" fitted onto the mains cut off switch (Pic.4). Also, it is recommended to carry out a risk analysis of the entire installation in compliance with EN 12445 and EN 12453 Norms, as specified in the book "Safety Norms".





**Attention: Set the switch to the required voltage rating**

- Supply voltage 230V set the switch to 230V
- Supply voltage 380V set the switch to 400V

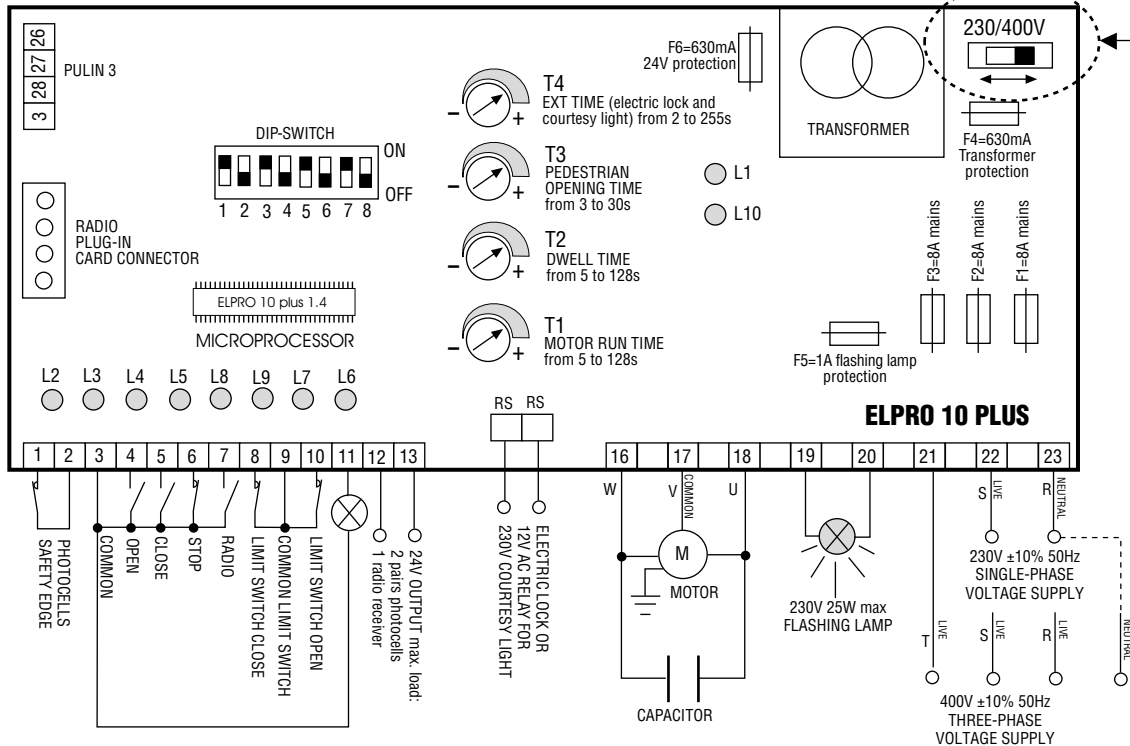


Fig. 5

**General description:** the electronic control panel Elpro 10 Plus, new generation, is designed to operate sliding gates. Power supply is 230/400V single-phase and three-phase. Built in full compliance with BT 93/68/CE Low Voltage and EMC 93/68/CE Electro-Magnetic Compatibility Regulations. Fitting operations are recommended by a qualified technician in conformity to the existing safety standards. The manufacturing company declines any responsibility for incorrect handling and application; also, it reserves the right to change or update the control panel any time.  
**Failure to follow installation regulations may result in serious damage to property and persons.**

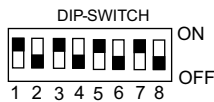


**PLEASE NOTE:**

- The control panel must be installed in a sheltered, dry place, inside the box provided with it.
  - Make sure that the power supply to the electronic programmer is 230V ±10% or 400V ±10%
  - Make sure that the power supply to the Electric Motor is 230V ±10% or 400 V ±10%
  - For distances of over 50 metres we recommend using electric cables with bigger sections.
  - Fit the mains to the control panel with a 0.03A high performance circuit breaker.
  - Use 1.5 mm<sup>2</sup> section wires for voltage supply, electric motor and flashing lamp. Maximum recommended distance 50 m. Use 1 mm<sup>2</sup> section wires for limit switches, photocells, push-buttons/key-switch and accessories.
  - Bridge terminals 1 and 2 if no photocells are required.
  - Bridge terminals 3 and 6 if no key- or push-button switches are required.
- N.W:** To fit extra accessories such as lights, CCTV etc. use only solid state relays to prevent damages to the microprocessor.

**Dip-Switch:**

- 1= ON. Photocells. Stop while opening
- 2= ON. Radio. No reversing while opening
- 3= ON. Automatic closing
- 4= ON. Preflashing activated
- 5= ON. Radio. Step by step. Stop in between
- 6= ON. Dead Man Control (Dip 4=OFF and Dip 3=OFF)
- 7= ON. No lamp on during dwell time
- 8= OFF. No function



**In case of failure of the panel:**

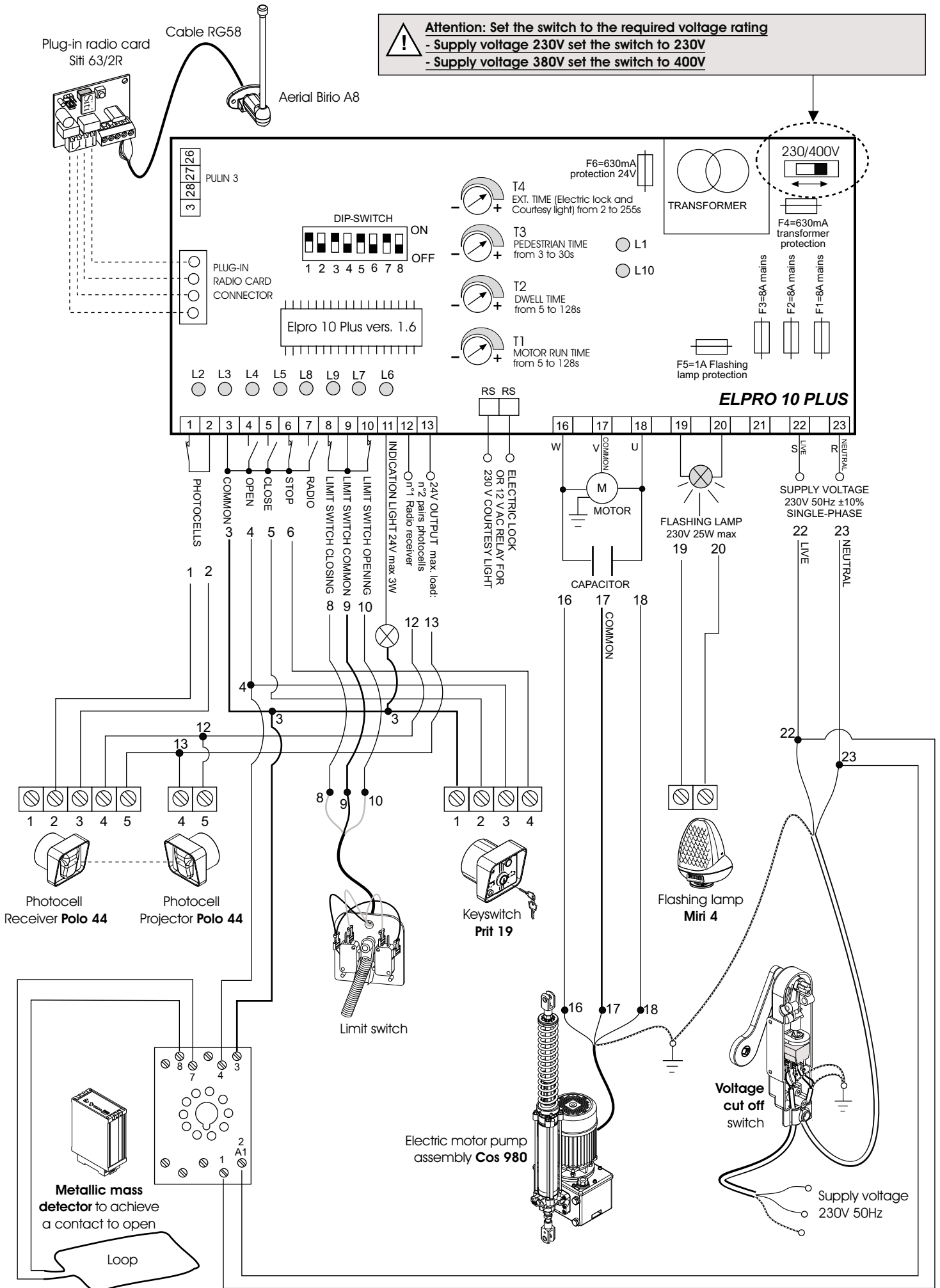
- Make sure that the power supply to the electronic programmer is 230V ±10% or 400V ±10%
- Make sure that the power supply to the Electric Motor is 230V ±10% or 400 V ±10%
- Check fuses
- Check photocells if contacts are normally closed
- Check all NC contacts
- Check that no voltage drop has occurred from the control panel to the electric motor

**Led Status Indication:**

- L1= 230V 50Hz power supply. Alight
- L2= Photocells, if obstructed light goes off
- L3= Open. Alight whenever an Open pulse is given
- L4= Close. Alight whenever a Close pulse is given
- L5= Stop. It goes off on pulsing Stop
- L6= Radio. It goes on by pressing a transmitter button
- L7= Gate Status; it flashes on gate opening
- L8= Limit switch Close; off when gate is closed
- L9= Limit switch Open; off when gate is open
- L10= It stays on for a time equal to the time set on T4

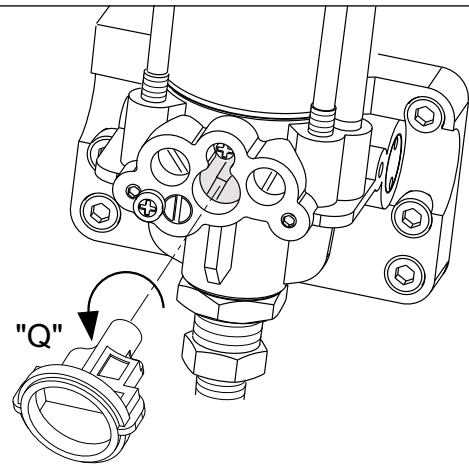
# ELECTRICAL CONNECTION DIAGRAM 230 V SINGLE-PHASE WITH ELPRO 10 PLUS

**Attention: Set the switch to the required voltage rating**  
 - Supply voltage 230V set the switch to 230V  
 - Supply voltage 380V set the switch to 400V



## OVERRIDE FOR MANUAL OPERATIONS OF THE BEAM

In events like power failure, the Bayt 980 mechanism can be "overridden" allowing the beam to be operated by hand. A special release spanner "Q" is provided with the barrier to operate the release ie. override the valve "V" positioned in the front side of the valve block, between the safety pressure valves (Pic.7).



To release turn the spanner "Q"  
**anti-clockwise (unscrew) by one turn**

Pic. 7

### TECHNICAL DATA

#### Electric Motor

Available Power	0.37KW (0.5CV)
Supply Voltage	230V
Frequency	50Hz
Absorbed Current	2,4A
absorbed Power	510 W
Capacitor	20 $\mu$ F
Motor Revolutions	1350 rev./1'
Intermittent Service	S3

#### Hydraulic Pump Assembly

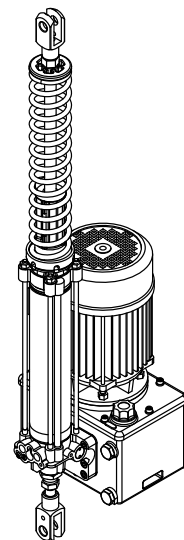
Average Working Pressure	2MPa (20 bars)
Maximum Pressure	4MPa (40 bars)
Power Oil type	OIL FADINI A 15 BY AGIP
Tank Volume	2.5dm <sup>3</sup> ( 2.5 liters)
Static Weight	22.5 Kg
Working Temperature	-20°C +80°C
Protection Standards	IP 673

#### Oil-hydraulic Actuator

Piston Inner Diameter	Ø40mm
"	Ø50mm
"	Ø60mm
Shaft Diameter	Ø16mm
Shaft Travel	176 - 187mm
Torque (Ø40)	250 Nm
Torque (Ø50)	400 Nm
Torque (Ø60)	570 Nm
Housing Weight Bayt 980 complete	75Kg
Beam Weight 6m	13Kg
Housing Colour	RAL 2002 red/orange
Top Cover Colour	Metal grey
Door Colour	Metal grey

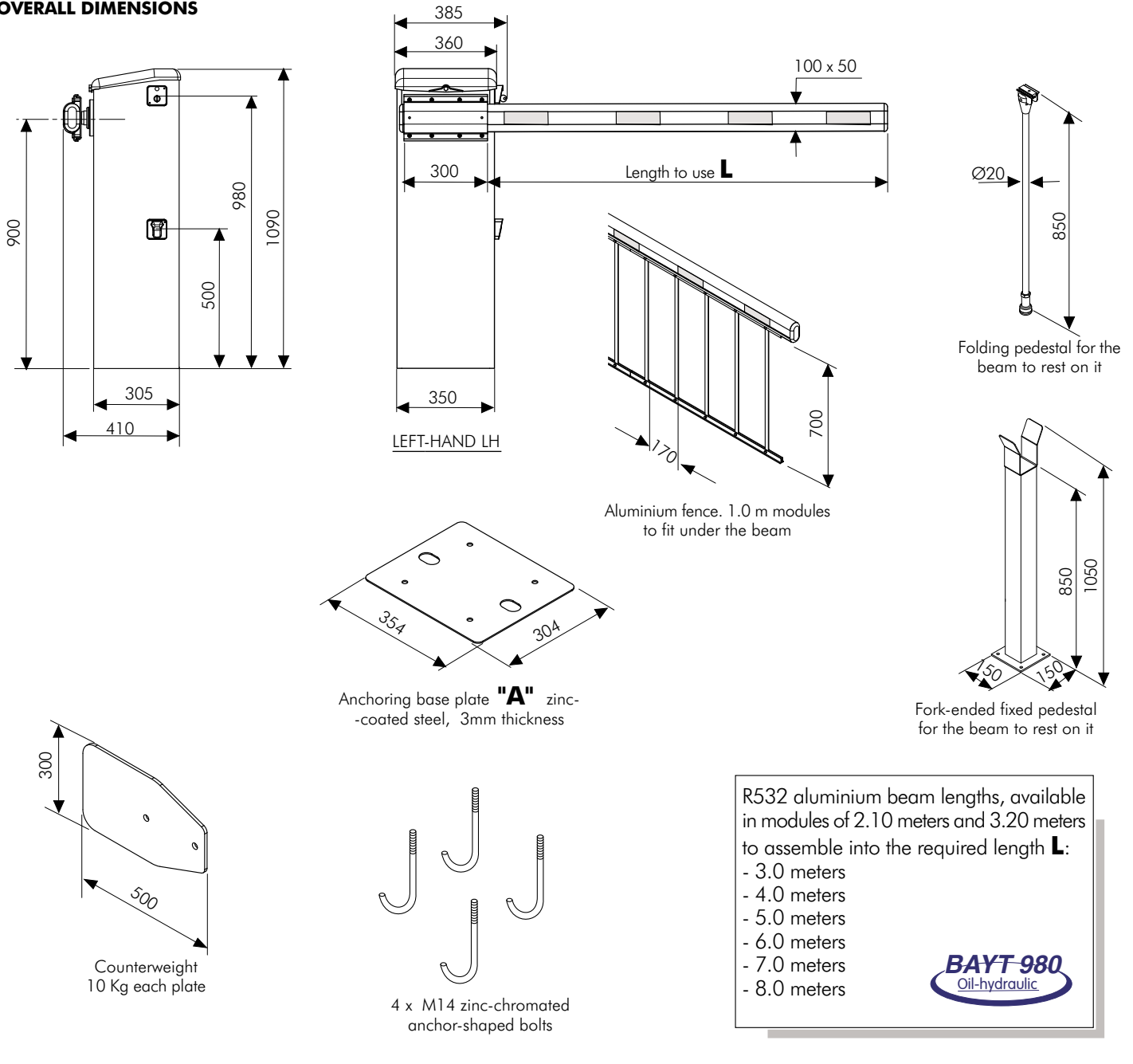
#### Pump/actuator assembly - standard range

Pump P12 - Diameter Ø40 - Opening Time	4s
Pump P6 - Diameter Ø40 - Opening Time	8s
Pump P6 - Diameter Ø50 - Opening Time	14s
Pump P6 - Diameter Ø60 - Opening Time	19s





**OVERALL DIMENSIONS**



**GENERAL WARNINGS**

- before installing the equipment carry out a Risk Analysis and fit any required device in compliance with EN 12445 and EN 12453 safety Norms
  - Packaging material such as cardboard, polystyrene , nylon, etc. ... should be properly disposed of through specialized companies
  - Should the operator be removed, **do not cut the electric cables**. These are to be removed from their respective terminals in the junction box
  - Switch off the mains switch before any operation in the junction box
  - The installation is to be properly grounded by using the yellow/green wire .
  - THE WARRANTY CERTIFICATE IS PROVIDED ON THE CUSTOMER'S REQUEST
- It is advised to carefully read the norms, advice and notes in the book "Safety Norms"

**SERVICE AND MAINTENANCE:**

- To achieve an optimum and longer life of the equipment and in observance of the safety regulations, it is recommended that inspections and proper maintenance are made by qualified technicians to the whole installation ie. both the mechanical and the electronic parts, as well as wiring.
- Oil-hydraulic Automation: maintenance inspection every 6 months
  - Electronic parts and safety accessories: maintenance inspection monthly

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.

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



**FADINI**  
the gate opener  
made in Italy



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