a **BANDINI INDUSTRIE** company

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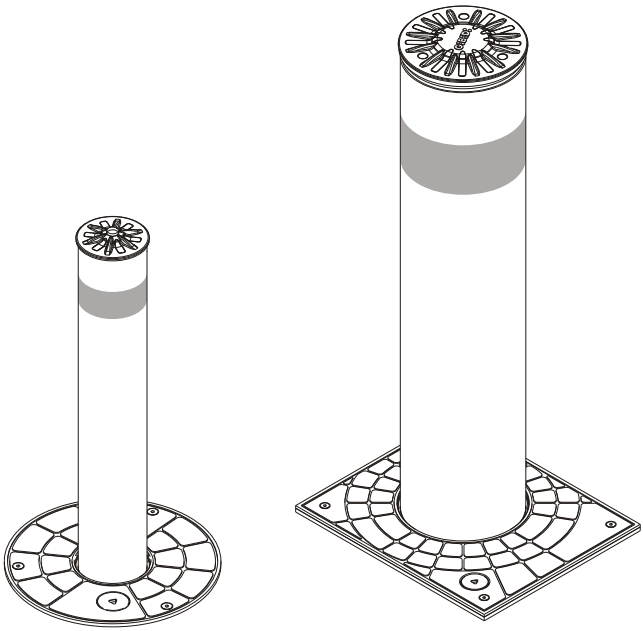

:TOUCHE

CE

TOUCHE - (120-275)

Hydraulic rising bollards
INSTRUCTIONS FOR INSTALLATIONS

UK

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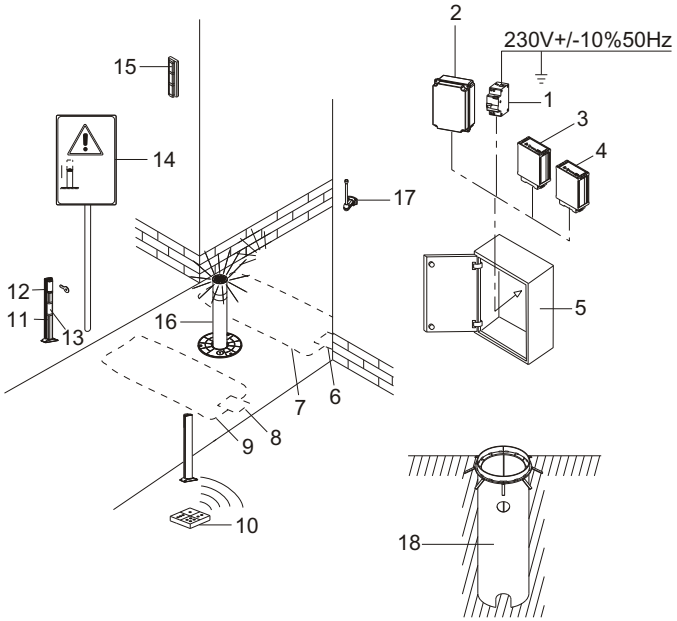

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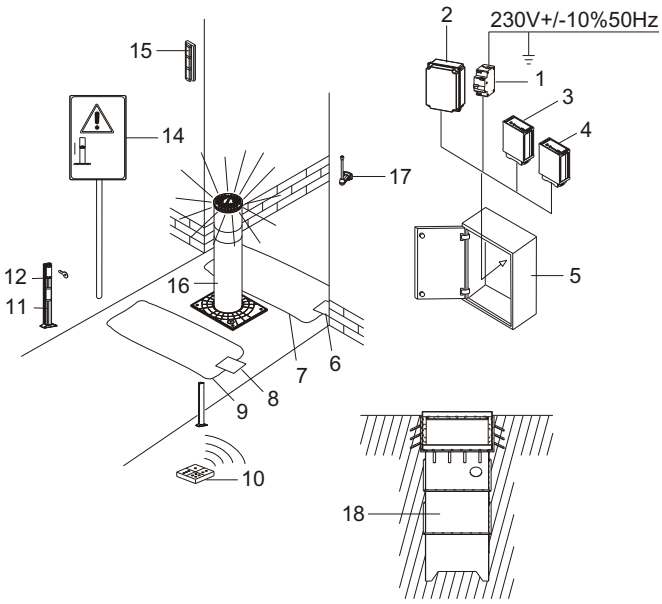

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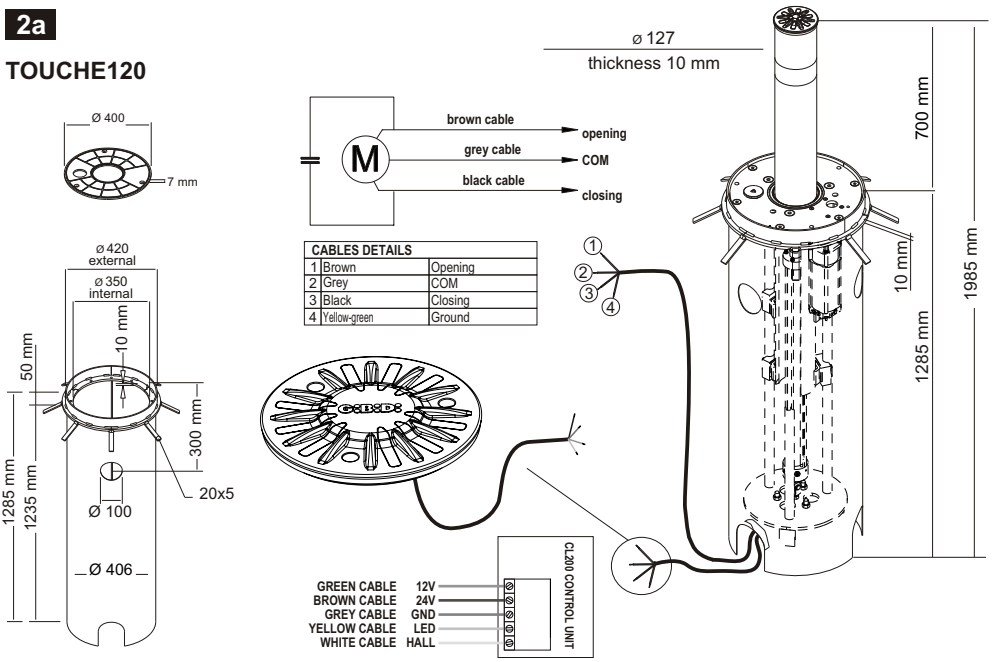

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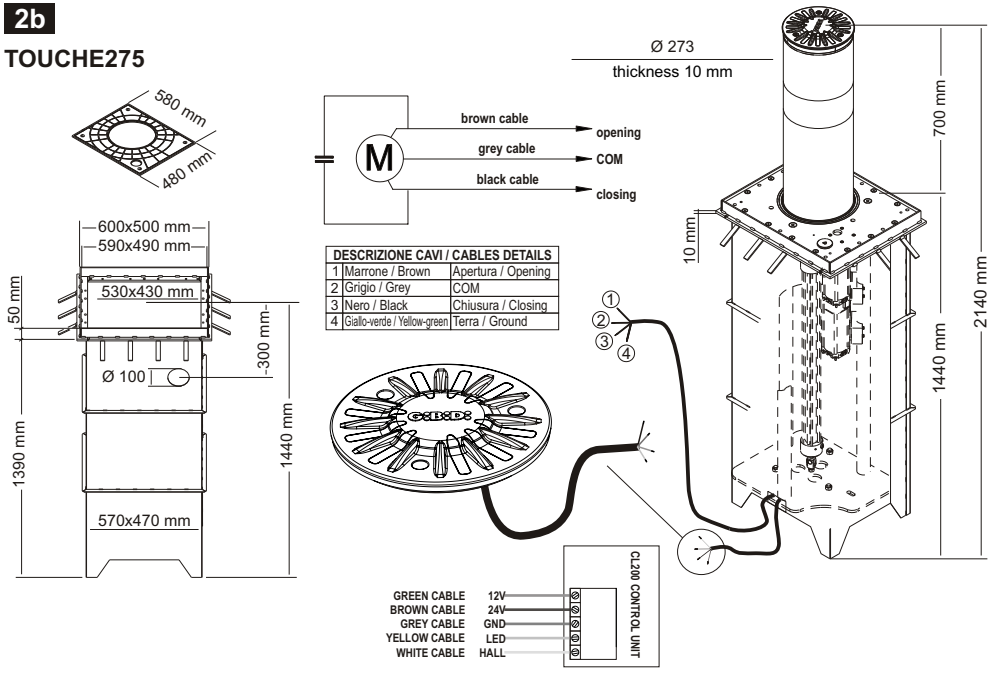

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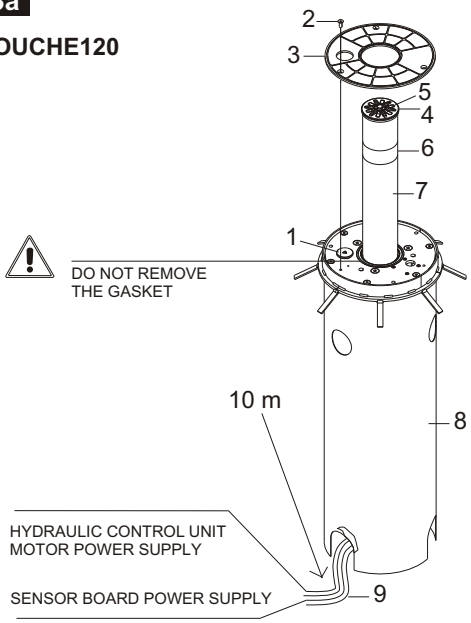

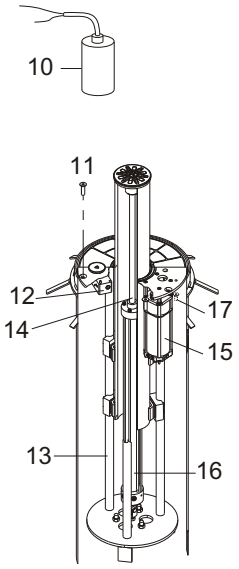

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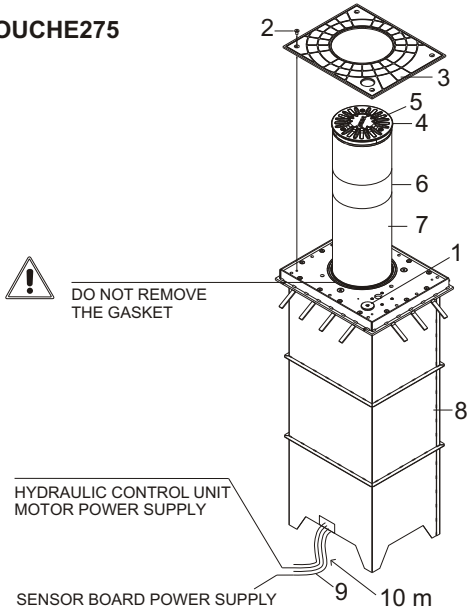

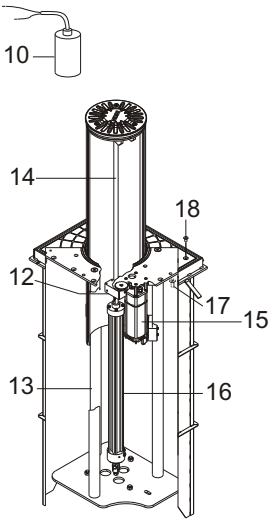

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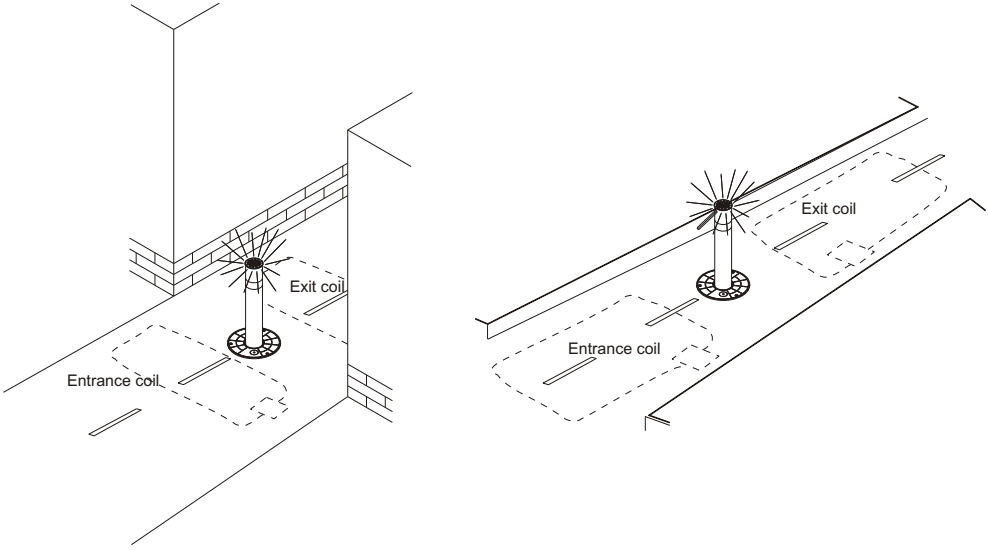

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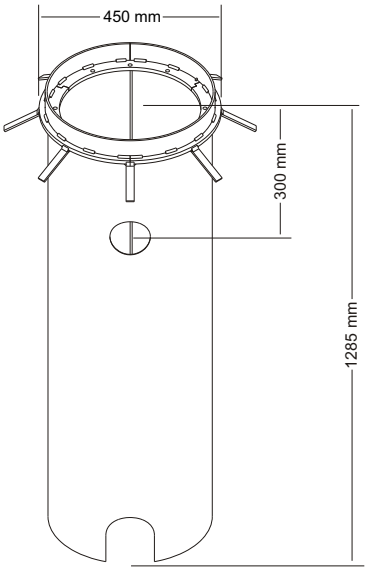

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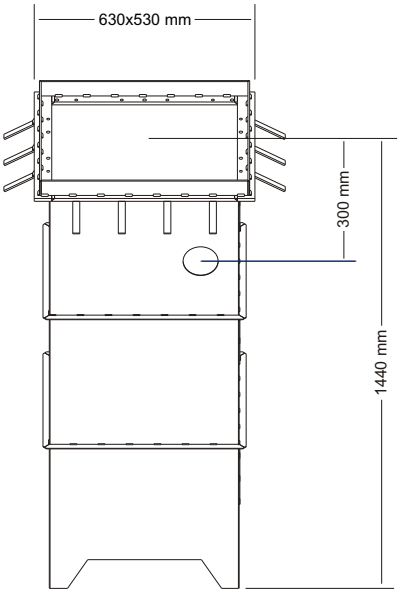

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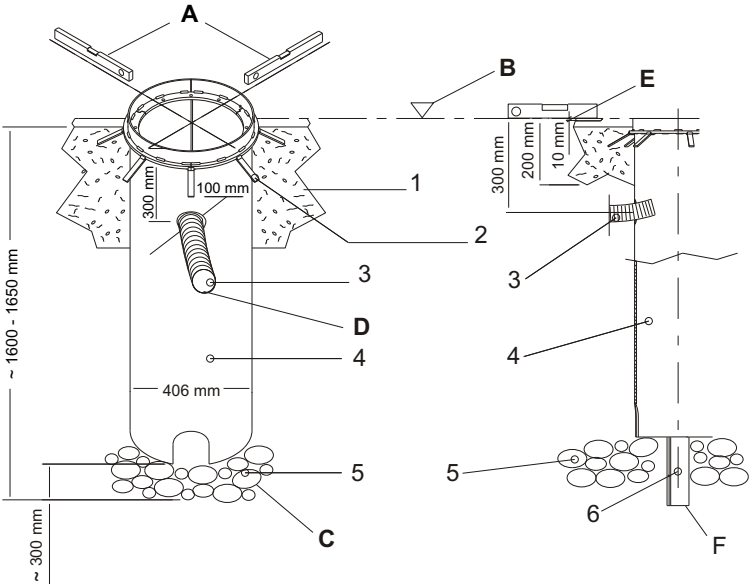
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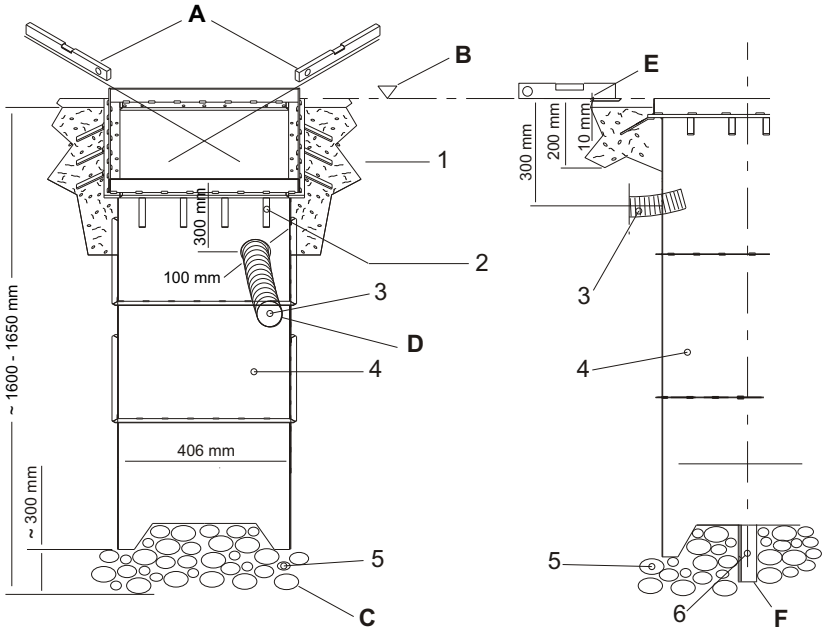
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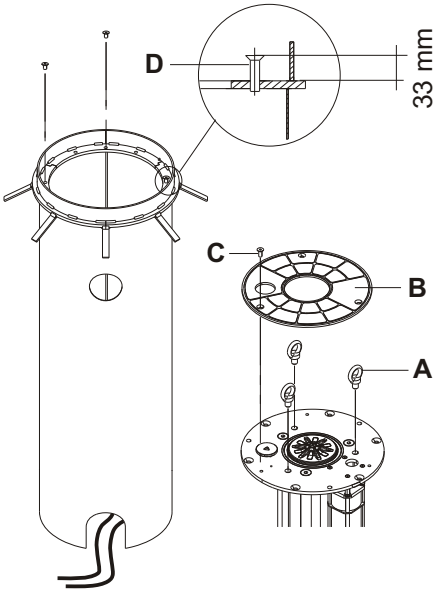

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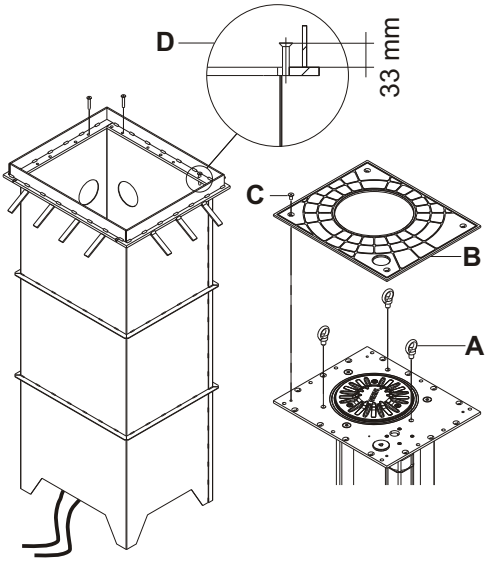

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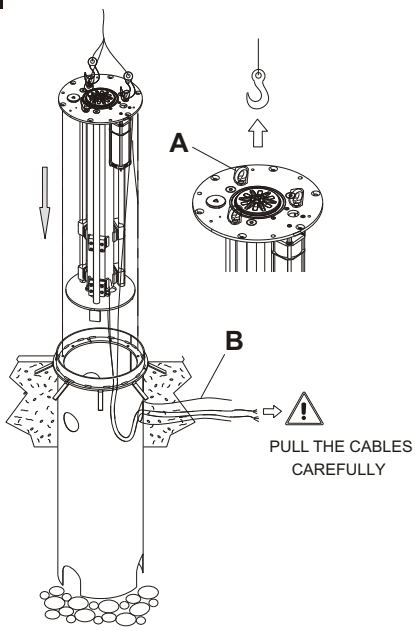

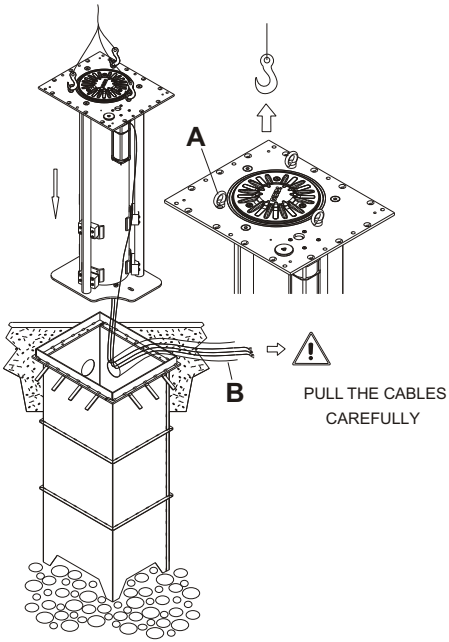

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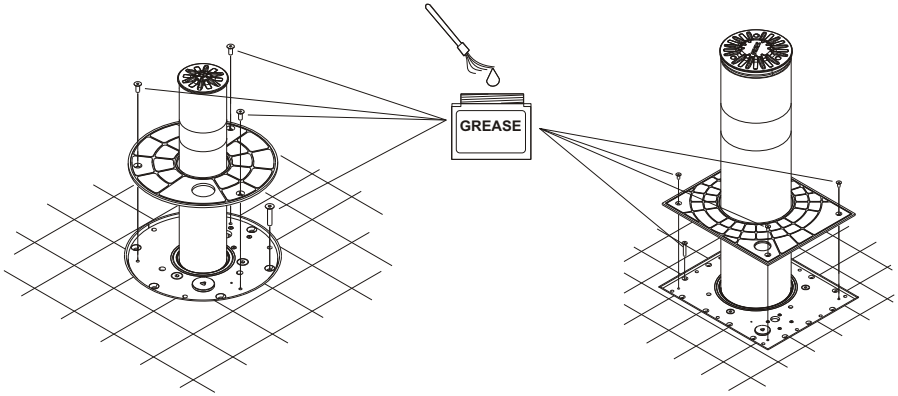

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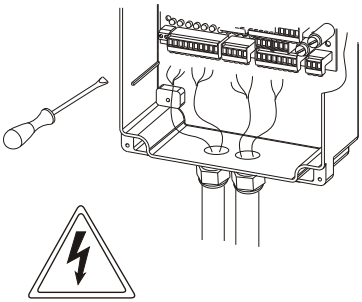

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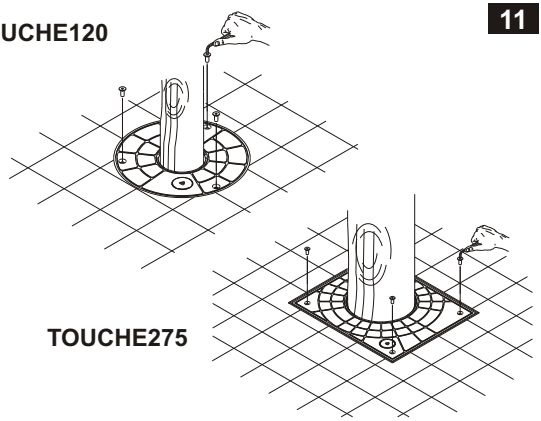

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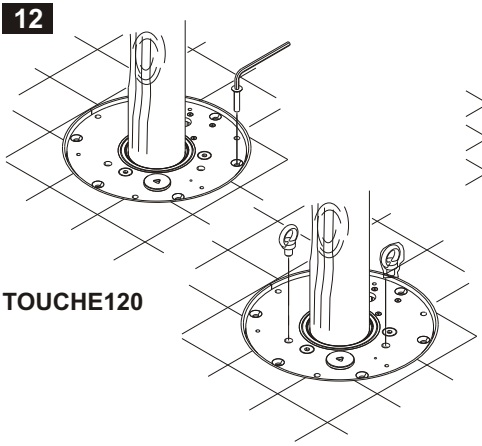

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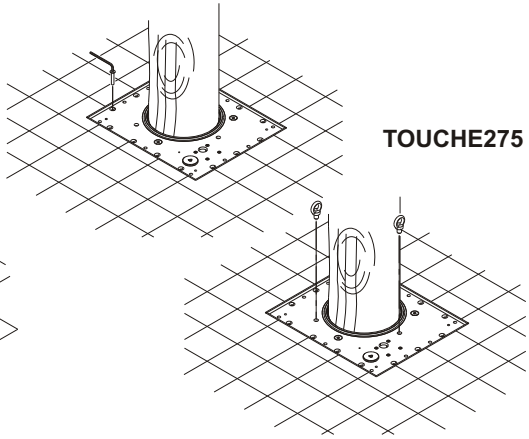

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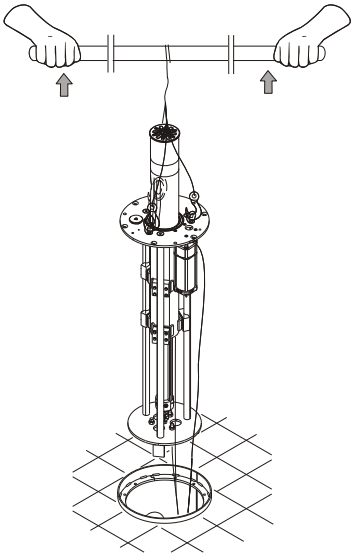

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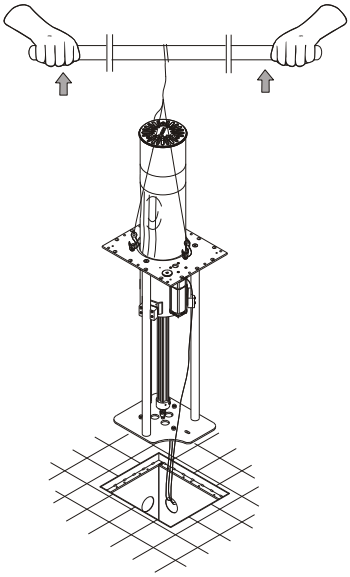

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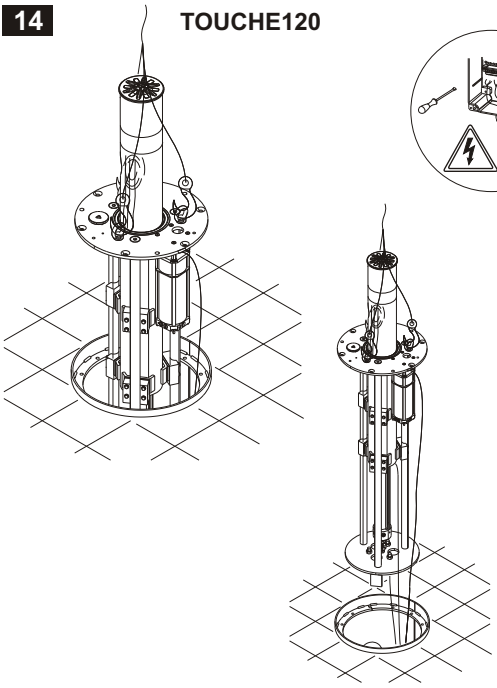

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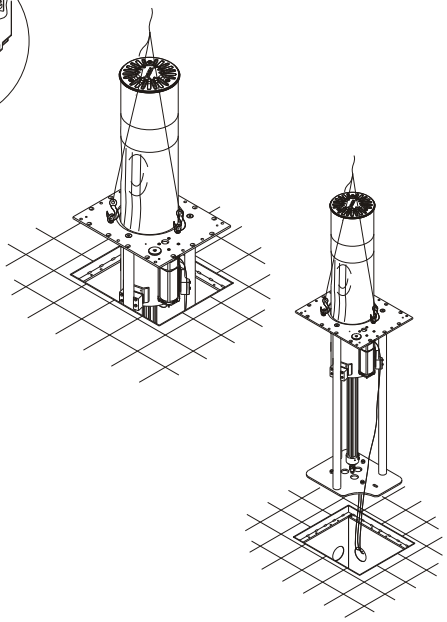

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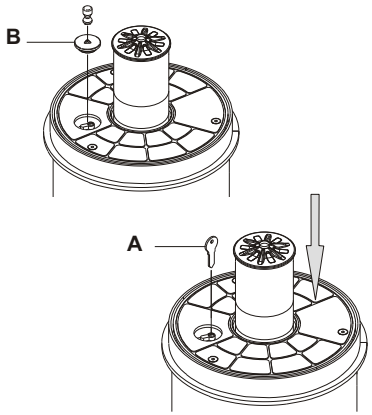

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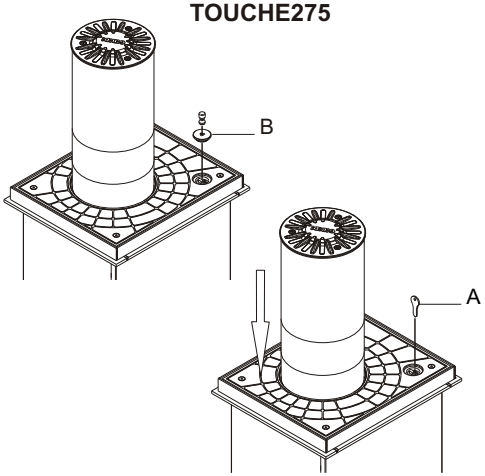

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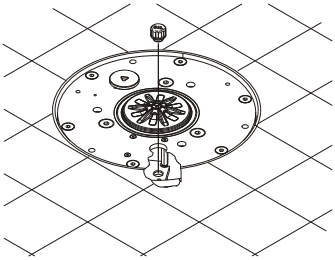

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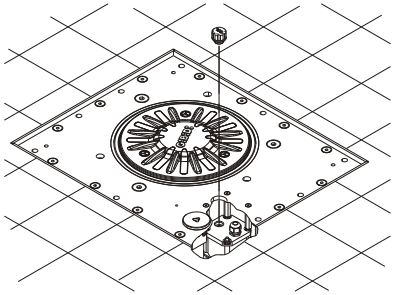

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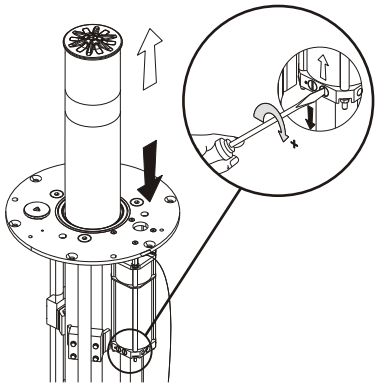

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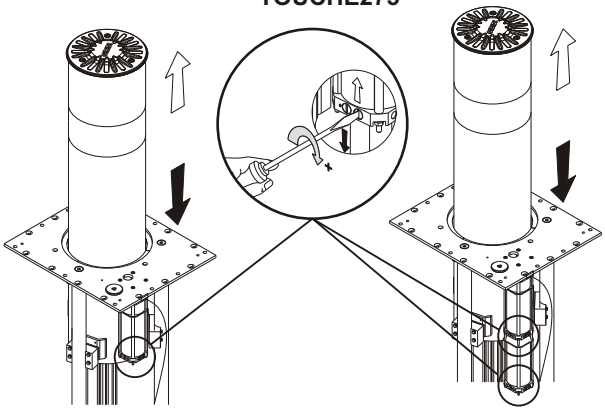

UK

INTRODUCTION

TOUCHE is a traffic deterrent bollard designed to control vehicle traffic. The very thick steel bollard is hydraulically driven and fully retracts into the ground except for the last 10 mm that stays above ground and has a warning light to indicate the presence of the retracted bollard. The hydraulic control unit is incorporated in the bollard. In the event of a power failure, the bollard can be fully retracted into ground by means of a manual release device. The electronic control unit must be installed outside the bollard in a protect place. The bollard comes with a set of accessories to ensure safety and manoeuvrability so that it can be installed in any place.

INSTALLATION WARNINGS

- The entire installation, checking, testing, risk analysis and subsequent maintenance must be performed by qualified technicians in compliance with the EN 12453-EN 12445 safety regulations and in accordance with Machine Directive 2006/42/EC in agreement with the customer requesting the installation.
- Keep the materials contained in the packaging away from children as they are potential source of danger.
- The manufacturer declines all responsibility for improper use or use different from that for which the automated device was designed, and if not using the original Gi.Bi.Di. components and accessories suitable for the intended application.
- Extra-EEC countries must in addition to the above mentioned regulations comply with the national reference standards to achieve an adequate safety level.
- Gi.Bi.Di. S.r.l. as manufacturer is not responsible for inobservance of good installation techniques and applications not indicated in this booklet.
- Anything not expressly stated in these instructions for use is not permitted.
- Do not attempt to make any repairs or work directly on the TOUCHE automated system but always call in qualified and authorised technicians.
- The automated device is packed on Europallets and must be handled with the utmost care using approved pallet transporters or lift trucks.
- Check that the earthing system is correctly installed and connect all the metal parts to it.
- The automated device is fitted with a Hall-effect position sensor for obstacle detection and inversion in the event of impact.
- The safety devices (EN 12978 standards) provide protection against the risks posed by mechanical moving parts, for example, crushing, dragging and shearing.
- It is advisable to use at least one warning light, e.g. the LED flashers integrated in the top of the bollard, and to post a warning sign in addition to the device mentioned above.
- Before carrying out any cleaning or maintenance operation on the system, disconnect the unit from the upstream power supply.
- Install an omnipolar switch with a contact opening distance equal to or greater than 3mm on the power supply of the automated device. It is advisable to use a 10A differential magnetothermal switch with omnipolar break.
- Check that a differential switch with a threshold of 0.03A is installed upstream of the system.
- The main power line of the control unit must be connected directly upstream of the main switch located in the unit; use flame retardant cables of the type approved by at least one European body. The main power line must be at least 3x2.5mm; however, the installer must assess its dimensioning in relation to the number of TOUCHE bollards installed and the distance from the delivery point so as to guarantee proper power supply (230V + 10%/50Hz during movement).
- The installer must give the customer all the information on how to manually lower the bollard in case of an emergency as well as the booklet that comes with the product.
- Do not make any modifications to the components of the TOUCHE automated system unless expressly authorised by GI.BI.DI. S.r.l.

UK

- Do not install the bollard in an explosive atmosphere. The presence of flammable gases or fumes constitutes a grave danger.
- It is suggested to store the automated device in closed places.

WARNING: IMPORTANT SAFETY INSTRUCTIONS.
It is important to follow these instructions in order to safeguard people.
Incorrect installation or improper use of the product may lead to serious harm to people.
Keep this instruction booklet and read it carefully before starting installation.

WARNINGS FOR THE USER

In the event of an operating fault or failure, cut the power upstream of the control unit and call Technical Service.
Periodically check functioning of the safety devices. Any repairs must be carried out by specialised personnel using original and certified materials.
The product may not be used by children or persons with reduced physical, sensorial or mental capacities, or lacking experience and knowledge, unless appropriately instructed.
Do not access the circuit board for adjustments and/or maintenance.

ELECTRICAL EQUIPMENT (1a - 1b)

Typical installation of the TOUCHE bollard in a public place
Before connecting all the electric cables to the control unit, all the bollard safety devices and visual warning accessories must be installed: metal detector coils, traffic lights, emergency switches, radio receivers, reception antennas.

1 - Differential magnetothermal switch
2 - Control unit with radio receiver
3 - Entrance metal detector
4 - Exit metal detector
5 - Anti-break-in protection cabinet
6 - Waterproof box for electrical connections to the exit inductive coil
7 - Underground inductive coil at exit
8 - Waterproof box for electrical connections to the entrance inductive coil
9 - Underground inductive coil at entrance
10 - Radio control
11 - Accessory column
12 - Key selector
13 - Photocell
14 - Danger warning signs
15 - Red/green traffic light
16 - TOUCHE bollard
17 - Radio reception antenna
18 - Metal case to be cemented into the ground

UK

TECNICAL DATA (2a - 2b)

Operator	TOUCHE 120	TOUCHE 275
Type	Hydraulic rising bollards	Hydraulic rising bollards
Hydraulic Control Unit		
Hydraulic pump	P10	P10
Pump flow rate	4.45 l/1'	4.45 l/1'
Operating pressure	10 bar	10 bar
Maximum pressure	25 bar	25 bar
Operating temperature	-20°C + 60°C	-20°C + 60°C
Hydraulic oil type	TOTAL EQUIVIS HVG 22L	TOTAL EQUIVIS HVG 22L
Weight	7 Kg	7 Kg
Degree of protection	IP67	IP67
Hydraulic Piston		
Plunger diameter	40 mm	40 mm
Rod diameter	20 mm	20 mm
Electric Motor		
Power absorbed	max 600 W	max 600 W
Supply voltage	230V ± 10%	230V ± 10%
Frequency	50 Hz	50 Hz
Current absorbed	max 4A	max 4A
Capacitor	25 µF	25 µF
Rotation speed	2800 rpm	2800 rpm
Performance		
Degree of protection	IP557	IP557
LED power supply	24 Vdc	24 Vdc
Manual lowering	YES	YES
Dead man's safety retraction	YES (3KG)	YES (3KG)
Resistance to impact without deformation	2000 Joule	15000 Joule
Breakthrough resistance	25000 Joule	350000 Joule
with single motor		
Operating cycle	10s opening - 30s pause - 18s closing	10s opening - 30s pause - 19s closing
Complete cycle time	58 s	59 s
Complete Opening Pause - Closing cycles	N° 62/hour	N° 61/hour
Annual cycles (with 8 operating hours a day)	N° 181000	N° 178100
Heavy use	YES	YES
Total weight incl.case	125 Kg	265 Kg
with double motor		
Operating cycle		7s opening - 30s pause - 12s closing
Complete cycle time		49 s
Complete Opening Pause - Closing cycles		N° 73/hours

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Annual cycles (with 8 operating hours a day)		N° 213100
Heavy use		YES
Total weight incl. case		272 Kg
Cylindrical column		
Outside diameter	Ø 127 mm	Ø 273 mm
Thickness	10 mm	10 mm
Treatment	black cataphoresis + RAL 9005 black polyester powder paint	black cataphoresis + RAL 9005 black polyester powder paint
Reflective adhesive strip	Standard H 50 mm	Standard H 50 mm

TOUCHE HYDRAULIC BOLLARD COMPONENTS (3a - 3b)

1- Manual release device cap
2- UNI 5933 M10x25 screws
3- Covering flange
4- Bollard cap with warning LEDs
5- Warning LEDs
6- Reflective adhesive strip
7- Retractable cylindrical steel column
8- Metal case
9- Electric cables
10- 25 µF capacitor
11- UNI 5933 M12x60 retaining screws
12- Manual release device
13- 3 guide rods
14- Piston rod
15- Hydraulic control unit
16- Hydraulic piston
17- UNI 5933M12x40 adjustment screws
18- UNI 5933M10x50 retaining screws

INSTALLING THE METALLIC MASS DETECTOR

The magnetic coil is an essential accessory to ensure that no transiting or stationary vehicle can come into contact with the bollard when it is rising. It must be positioned in the vicinity of the bollard where the vehicles enter and exit. It is important to check that in the immediate vicinity of the electronic control units there are no sources of disturbance that may condition the metal detector coils. It is recommended to install the magnetic coil according to a rectangular perimeter with the longest side perpendicular to the movement direction **(4)**. If this is not possible, other configurations may be used, however always respecting the coil characteristics. Always refer to the instruction manual provided with the metal detector (GIBIDI item code: 48134 – 48134/220V)

LAYING THE FOUNDATION FOR THE BOLLARD

1- Draw the layout for bollard installation and check if there are any sub-services in the area to be excavated.
2- Excavate according to the dimensions of the metal containment case **(5)**.
3- Check water absorption into the ground (wet it with about 40 litres of water and check that the water is drained in less than 30 minutes); otherwise provide for rainwater drainage by laying a 60mm pipe with non-return valve connected to the sewerage or, alternatively, a well (equipped with a drainage system, for example, an electric pump) with a depth greater than the cement pipe that collects and drains the rainwater.
4- Pour in some gravel - as monogranular as possible (grain size about 8-20mm Ø) **C(6a - 6b)**, to form a layer approximately 30cm thick and compact and level it to obtain a suitable laying surface.
5- To improve rainwater drainage in the excavation and in the area of the metal case run a PVC tube segment of 125 mm in diameter and about 30cm long through the gravel. **F(6a - 6b)**.

UK

6- Install the metal case, taking into account that the upper end of the case must be approximately 10 mm above ground level (to limit rainwater flowing into the case) **E(6a - 6b)**.
7- Once the metal case has been positioned and before cementing it, perfectly level the surface using a spirit level **A(6a - 6b)** so that the bollard can move perfectly vertically. The flooring or road paving must be flush with the upper end of the metal case **B(6a - 6b)**.
8- Once the metal case is in position and before pouring the concrete, install a flexible tube with an inside diameter of 50 mm through which to run the electric cables **D(6a - 6b)** coming from the control unit.
9- Pour concrete (Rck= 25 N/mm²) all around the case with a pump truck and vibrate the casting.
10- Lay the other pipes from the point where the control unit is installed to the point where the additional accessories are installed (traffic lights, magnetic coils, etc.), and prepare for electrical connection, earthing and any controls.
11- Wait at least two weeks for the concrete to reach 80% of its mechanical properties and then finish the road surface.
12- Fit the adjusting screws **D(7)** in the position indicated.
13- Install the TOUCHE bollard in the metal case after removing the three screws **C(7).** Remove the cap **B(7)** and fit the three M20 eyebolts **A(7)** in the threaded holes. Lift TOUCHE **(8)** using a winch or lift truck hooking it into the 3 eyebolts and install it in the metal case after fitting the connection line in the previously prepared tube **B(8)**.
It is advisable to use a cable puller to run the electric cables through the tube in order not to damage them.
14- Check that the top of the TOUCHE bollard is level using a spirit level. If necessary, adjust by turning the adjustment screws **D(7)**.
15- It is advisable to lubricate the retaining screws and the bollard **(9)** cap lock screws with grease, which will make future maintenance operations easier.

REMOVING THE BOLLARD

In the event of violent impact against the raised bollard which can compromise its operation, the bollard can be quickly removed from its seat.
This operation can be carried out in two ways, both taking maximum 5-10 minutes.

METHOD 1
Three operators are required to simultaneously perform the following operations:
1- After cutting the power to the main electric panel, the first operator disconnects the electric cables **(10)** so that they can be pulled out when TOUCHE is removed.
2- The second operator unscrews the covering collar screws **(11)**, removes the collar, unscrews the TOUCHE retaining screws **(12)** and then screws on the three M20 eyebolts.
3- Hook into the eyebolts using a rigid pipe at least 2,5 m long and a cord.
4- The third operator lifts the bollard while the other two operators pull out the electric cables taking the utmost care not to damage them **(13)**. The cables must be completely removed from their seat.

Tools required:
- A n° 6 allen wrench for the bollard cap and a n°8 Allen wrench for the flange retaining screws
- Three M20 eyebolts
- Rigid pipe at least 2,5m long
- Cord or chain to hook onto the eyebolts

METHOD 2
Two operators are required to simultaneously perform the following operations:
1- After cutting the power to the main electric panel, the first operator disconnects the electric cables **(10)** so that they can be pulled out when TOUCHE is removed.

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2- The second operator unscrews the covering collar screws **(11)**, removes the collar, unscrews the TOUCHE retaining screws **(12)** and then screws on the three M20 eyebolts.
3- Use a mechanical arm to hook onto the eyebolts of the bollard and then lift and completely remove it taking care not to rip or cut the electric cables **(14)**.

DESCRIPTION OF THE TOUCHE BOLLARD OPERATION

Once TOUCHE is installed and operational with all the control and safety devices fitted, the technical file must be completed, including a full risk analysis, in accordance with the safety regulations.
Once the main electric panel is powered, TOUCHE operates as follows:
- After receiving an opening or closing pulse, the bollard retracts into the ground or rises above the ground according to the installation requirements.
- The magnetic coils can be set so that the bollard lowers or does not rise when a vehicle moves across or is stationary on it.
- A red/green traffic light system signals when the vehicle may access, when the bollard is about to rise, and when the road is inaccessible.
- LED warning lights flash intermittently while the bollard is rising or lowering and they remain on fixed when the bollard if fully raised.
- A white or red homologated reflective adhesive strip is applied around the bollard.

MANUAL EMERGENCY RELEASE DEVICE

If the bollard needs to be lowered manually, remove the cap **B(15)** using a dedicated key, insert the unlocking key **A(15)** in the lock underneath and the bollard will automatically retract into its seat.

HALF-YEARLY ROUTINE MAINTENANCE PROCEDURE

For optimal system performance over time and in accordance with the safety regulations, proper maintenance and monitoring of the entire installation by qualified technicians is necessary, including the automated device, the electronic control units installed and the wiring.
The standard sequence for half-yearly routine maintenance is as follows:
- Clean the metal case by vacuuming out the materials that have deposited
- Clean and lubricate the sliding guides
- Check the seals and replace them if necessary
- Clean the water drains positioned at the bottom of the metal case
- Check for piston oil leaks and repair if necessary
- Clean the bollard movement cylinder and touch up where paint has chipped off
- Check that all the bollard screws are tight
- Check the hydraulic control unit and top up the oil **(16)** if necessary, and check the operating pressure calibration **(17)**
- Check functioning of the safety devices
- Test the earth resistance and continuity using a loop tester
- Check functioning of the flasher integrated in the top of the bollard
- Check functioning of the traffic lights
- Test the differential magnetothermal switch located upstream of the system both for insulation and continuity using a loop tester
- Check the metal detector magnetic coils
- Visually inspect the electronic movement control unit (for example: contacts, burned relays, oxidised terminals, etc.)

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- Check proper functioning of the manual release device
- Check functioning of the radio control receiver

Gi.Bi.Di. Srl reserves the right to change the technical data without prior notice in relation to product development.

MALFUNCTIONING

In the event of any malfunction, cut the power to the system and call in a qualified technician (installer).

UK

CE Declaration of conformity

The manufacturer:

GI.BI.DI. S.r.l.

Via Abetone Brennero, 177/B,
46025 Poggio Rusco (MN) ITALY

Declares that the products:

HIDRAULIC RISING BOLLARDS TOUCHE

Are in conformity with the following CEE Directives:

- **LVD Directive 2006/95/CE and subsequent amendments**
- **EMC Directive 2004/108/CE and subsequent amendments;**

and that the following harmonised standards have been applied:

- **EN60335-1, EN61000-6-1, EN61000-6-3**

Data 30/09/09

Managing Director
Oliviero Arosio

UK

EXTRAORDINARY MAINTENANCE

Date:	Installer company stamp:
Technician sign:	

Date	Notes	Technician sign

Date:	Installer company stamp:
Technician sign:	

Date	Notes	Technician sign

NOTE

Cod. AIC6518 -10/2009 - Rev. 00

a **BANDINI INDUSTRIE** company

G:B:D:

ISO 9001 Cert. N. 0079

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