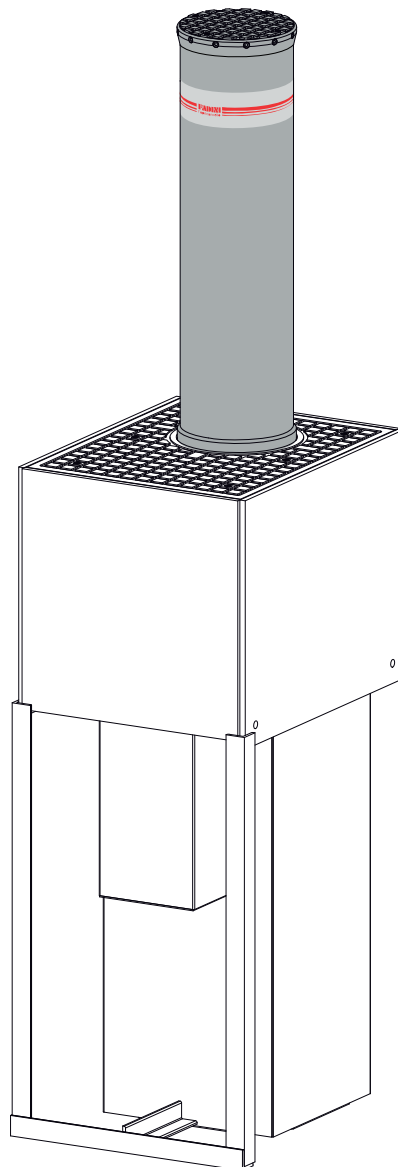




TALOS M50



Security bollard with fully retractable post. Certified and tested in compliance with:

- ASTM F2656-15 C750 (former K12)
- PAS 68:2013 V/7500 (N3)/80
- IWA 14-1:2013 V/7200 [N3C]/80



Made in Italy



GENERAL WARNINGS FOR PEOPLE SAFETY

THANK YOU

Thank you for purchasing a Fadini product. Please read these instructions carefully before using this appliance. The instructions contain important information which will help you get the best out of the appliance and ensure safe and proper installation, use and maintenance. Keep this manual in a convenient place so that you can always refer to it for the safe and proper use of the appliance.

INTRODUCTION

This operator is designed for a specific scope of applications as indicated in this manual, including safety, control and signaling accessories as minimum required with Fadini equipment. □ Any applications not explicitly included in this manual may cause operation problems or damages to properties and people. □ Meccanica Fadini S.r.l. is not liable for damages caused by the incorrect use of the equipment, or for applications not included in this manual or for malfunctioning resulting from the use of materials or accessories not recommended by the manufacturer. □ The manufacturer reserves the right to make changes to its products without prior notice. □ All that is not explicitly indicated in this manual is to be considered not allowed.

BEFORE INSTALLATION

Before commencing operator installation assess the suitability of the access, its general condition and the structure. □ Make sure that there is no risk of impact, crushing, shearing, conveying, cutting, entangling and lifting situations, which may prejudice people safety. □ Do not install near any source of heat and avoid contacts with flammable substances. □ Keep all the accessories able to turn on the operator (transmitters, proximity readers, key-switches, etc) out of the reach of the children. □ Transit through the access only with stationary operator. □ Do not allow children and/or people to stand in the proximity of a working operator. □ To ensure safety in the whole movement area of a gate it is advisable to install photocells, sensitive edges, magnetic loops and detectors. □ Use yellow-black strips or proper signals to identify dangerous spots. □ Before cleaning and maintenance operations, disconnect the appliance from the mains by switching off the master switch. □ If removing the actuator, do not cut the electric wires, but disconnect them from the terminal box by loosening the screws inside the junction box.

INSTALLATION

All installation operations must be performed by a qualified technician, in observance of the Machinery Directive 2006/42/CE and safety regulations EN 12453 - EN 12445. □ Verify the presence of a thermal-magnetic circuit breaker 0,03 A - 230 V - 50 Hz upstream the installation. □ Use appropriate objects to test the correct functionality of the safety accessories, such as photocells, sensitive edges, etc. □ Carry out a risk analysis by means of appropriate instruments measuring the crushing and impact force of the main opening and closing edge in compliance with EN 12445.

□ Identify the appropriate solution necessary to eliminate and reduce such risks. □ In case where the gate to automate is equipped with a pedestrian entrance, it is appropriate to prepare the system in such a way to prohibit the operation of the engine when the pedestrian entrance is used. □ Apply safety nameplates with CE marking on the gate warning about the presence of an automated installation. □ The installer must inform and instruct the end user about the proper use of the system by releasing him a technical dossier, including: layout and components of the installation, risk analysis, verification of safety accessories, verification of impact forces and reporting of residual risks.

INFORMATION FOR END-USERS

The end-user is required to read carefully and to receive information concerning only the operation of the installation so that he becomes himself responsible for the correct use of it. □ The end-user shall establish a written maintenance contract with the installer/maintenance technician (on -call). □ Any maintenance operation must be done by qualified technicians. □ Keep these instructions carefully.

WARNINGS FOR THE CORRECT OPERATION OF THE INSTALLATION

For optimum performance of system over time according to safety regulations, it is necessary to perform proper maintenance and monitoring of the entire installation: the automation, the electronic equipment and the cables connected to these. □ The entire installation must be carried out by qualified technical personnel, filling in the Maintenance Manual indicated in the Safety Regulation Book (to be requested or downloaded from the site www.fadini.net/supporto/downloads).

□ Operator: maintenance inspection at least every 6 months, while for the electronic equipment and safety systems an inspection at least once every month is required. □ The manufacturer, Meccanica Fadini S.r.l., is not responsible for non-observance of good installation practice and incorrect maintenance of the installation.

DISPOSAL OF MATERIAL

Dispose properly of the packaging materials such as cardboard, nylon, polystyrene etc. through specializing companies (after verification of the regulations in force at the place of installation in the field of waste disposal). Disposal of electrical and electronic materials: to remove and dispose through specializing companies, as per Directive 2012/19/UE.

Disposal of substances hazardous for the environment is prohibited.



CE DECLARATION OF CONFORMITY of the manufacturer:

Meccanica Fadini S.r.l. (Via Mantova, 177/A - 37053 Cerea - VR - Italy) declares under its own responsibility that Talos M50 is in compliance with the Machinery Directive 2006/42/CE, moreover: it is to be sold and installed as a comprehensive "Automatic System", including the accessories and components as recommended by the Manufacturing Company. In observance of the current directives, any automatic system is to be regarded as a "machine". Therefore it is required that all the applicable safety norms be strictly complied with by the installation agents, who are also required to issue a Declaration of Conformity of their own. The manufacturing company is not liable for incorrect applications or misuse of its products that are declared to be produced in compliance with the following norms: EN 12445 & EN 12453 ie. analysis of the risk and actions to cure them, Low Voltage Directive 2014/35/UE, Electro-magnetic Compatibility Directive 2014/30/UE. In order to certify the product, the Manufacturer declares under own responsibility the compliance with the PRODUCT NORMS EN 13241-1.

Meccanica Fadini S.r.l.
Director in charge

GENERAL DESCRIPTION

Security bollard fitted with a post, that retracts completely flat with the road level, and an incorporated oil-hydraulic motor-pump. Suitable for heavy duty applications being certified and tested in compliance with:

- ASTM F2656-15 C750
- PAS 68:2013 V/7500 (N3)/80
- IWA 14-1:2013 V/7200 [N3C]/80

The bollard is designed and constructed to be able to stop vehicles weighing 7.500 kg, running at a speed of 80 km/h and to absorb at least 1.872.000 Joules of energy, in compliance with the ASTM F2656-15, PAS 68:2013 and IWA 14-1:2013 standards.

This bollard is designed for the protection of special areas, such as: military bases, airports, embassies, consulates, banks, prisons, etc. and all those areas requiring a high level of security and perimeter protection.

The bollards is fitted with a post (cylinder) rising 1.000 mm from ground level, diameter 275 mm, thickness 20 mm.

The post of the bollard (when in fully raised position) remains 50 cm (constraint) inside the enclosure and is supported by two reinforcement plates, the thickness of each is 15 and 30 mm respectively.

The post is made of S355K2H steel, the surface is cataphoresis treated and coated by polyester powder; the post of the bollard is well visible in any climate conditions, being fitted with an approved, back-reflecting band sticker. The post head is completed with a rubber edge providing protection in case of accidental impacts with pedestrians, etc. and 12 LEDs flashing.

The foundation casing is made of treated steel, hot dip galvanized, while the structure of the inner assembly of the bollard is cold dip galvanized.

It is fitted with two magnetic limit switches: one for the post in raised position and one for the post in lowered position.

All the inner electrical connections (oil-hydraulic motor-pump, limit switches, LEDs and possible accessories) are factory pre-wired in a watertight junction box fitted with a quick disconnection connector for the power supply cable.

The protection grade of the connector fitted to the junction box is IP 66.

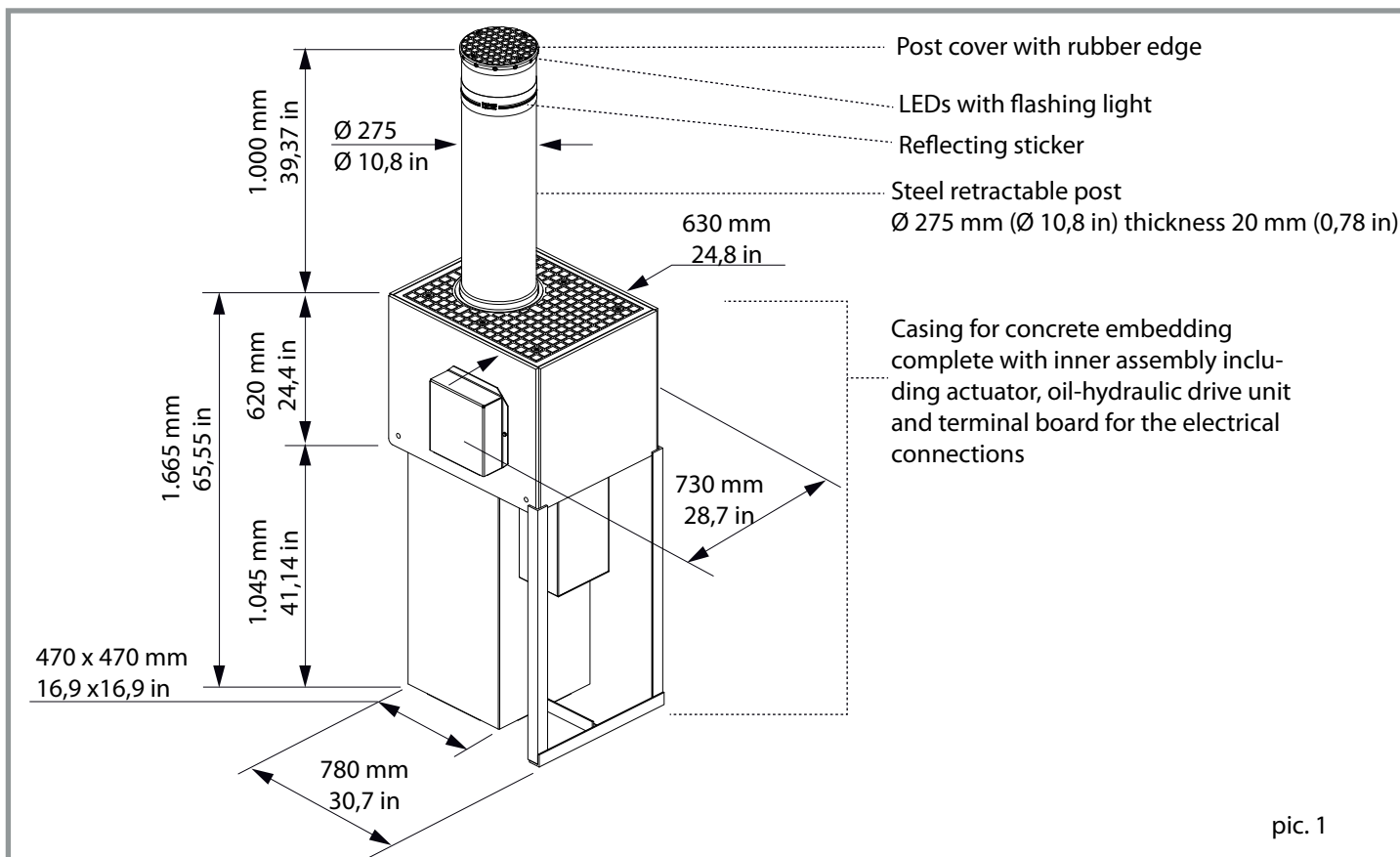
Available, on request, even IP 67 and explosion-proof.

The oil-hydraulic drive unit is made up of two pumps, each operated by a 230 Vac electric motor. Protection grade IP 67.

They are located in the upper part of the foundation enclosure, outside of the post, and are easy to be accessed once the rectangular cover plate has been removed.

High pressure tubes (300 bars) connect the oil-hydraulic drive unit to the actuator.

ELPRO S50 is a printed circuit control board powered with 230 Vac voltage, external to the bollard and housed in a plastic box made of polycarbonate. Connections between the bollard and the control board must be made by using a multipole cable type FG 70R 12x1,5 mm² up to 20 m maximum; beyond this distance, cable section must be adequate, according to the rules of good installation praxis.

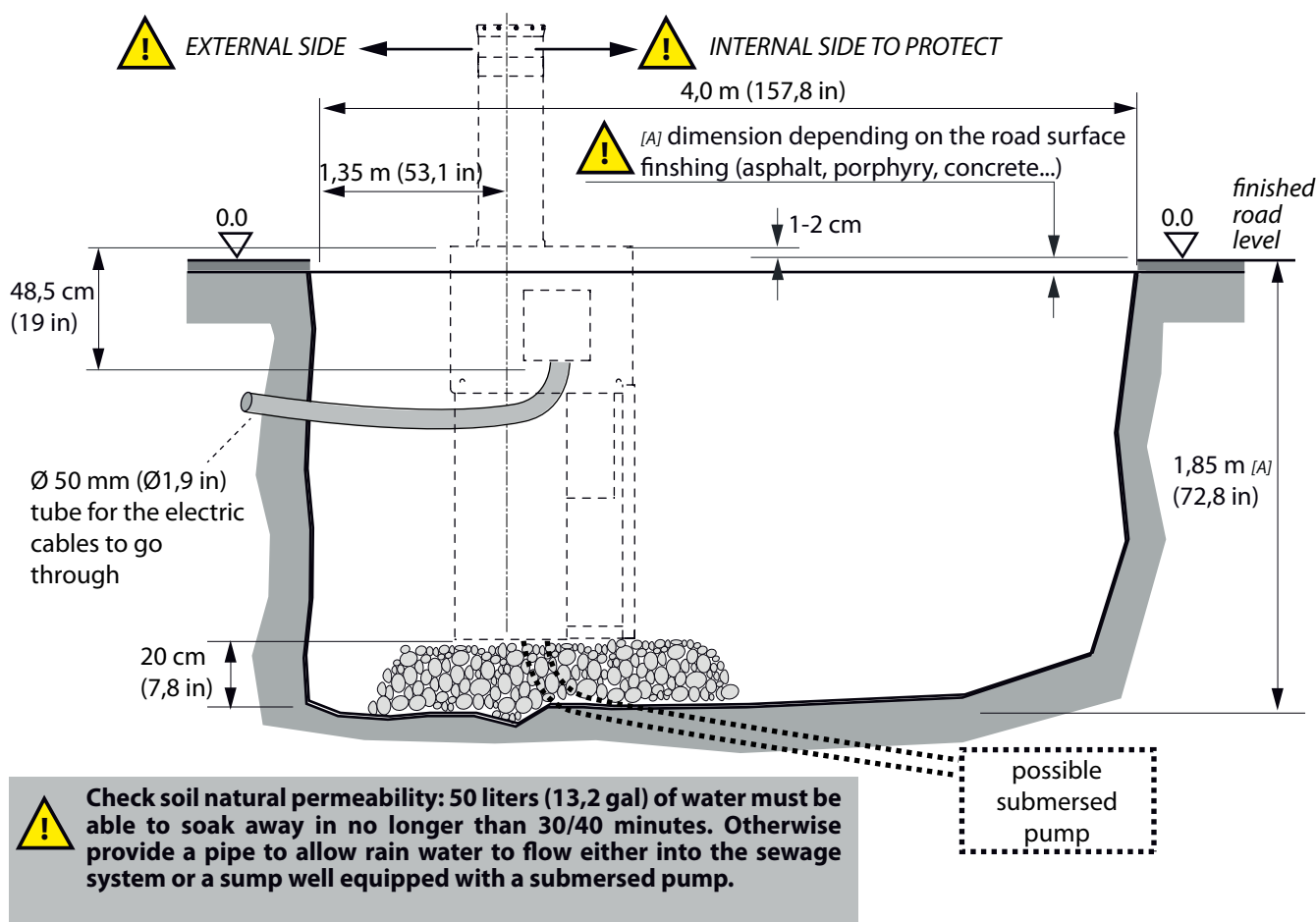


pic. 1

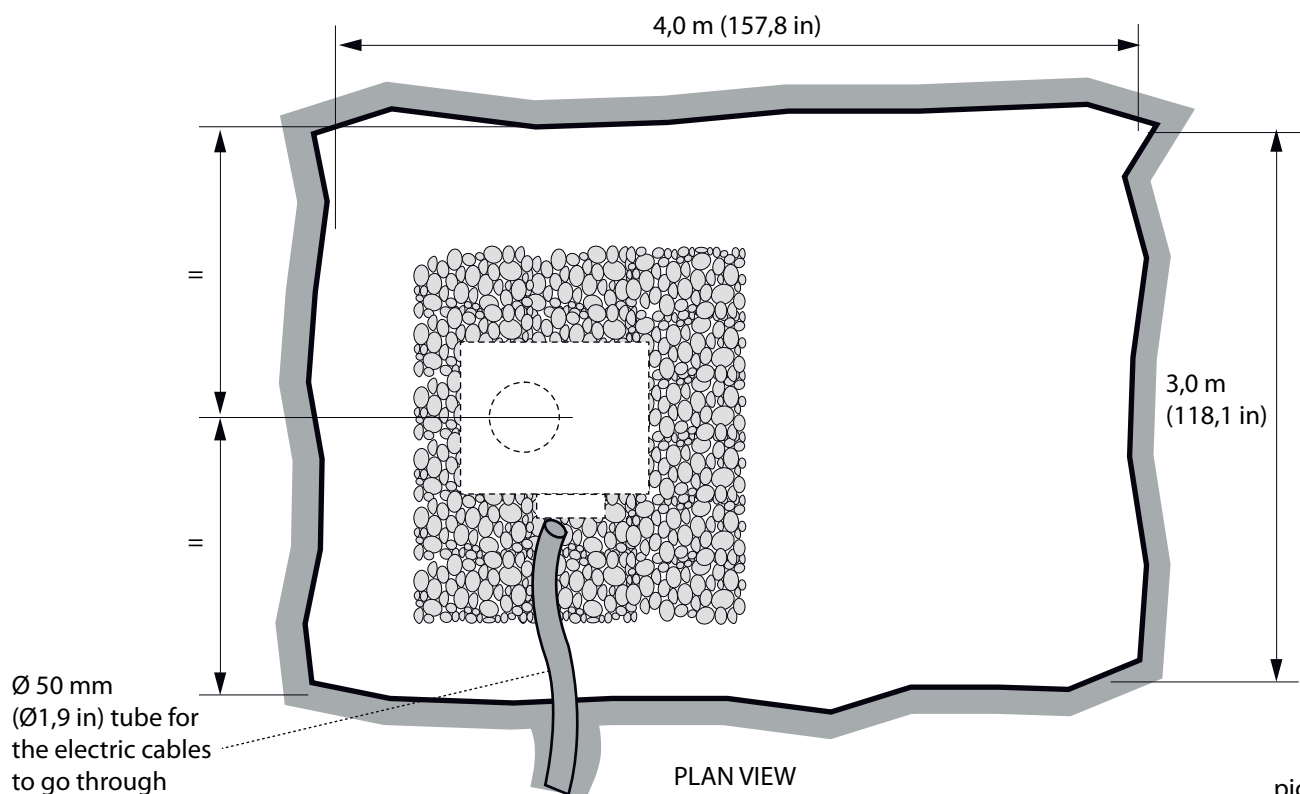
EXCAVATION FOR POSITIONING OF THE CASING IN A CONCRETE FOUNDATION

Dig a pit in the soil of about 4x3 m (157,8x118,1 in) and about 1,8 m (70,8 in) deep from the finished road level [A], as indicated in pic. 2.
 Put a layer of pebbles in the bottom for rain water to soak away. Should rain water drainage be difficult in the bottom, create a smaller pit for water to gather in it and be pumped out of the bottom of the main pit by a submersed pump. Lay a Ø 50 mm (Ø 1,9 in) corrugated tube, suitable for the electric cables required to operate the bollard to be pulled through it.

English



SECTIONAL VIEW



PLAN VIEW

pic. 2

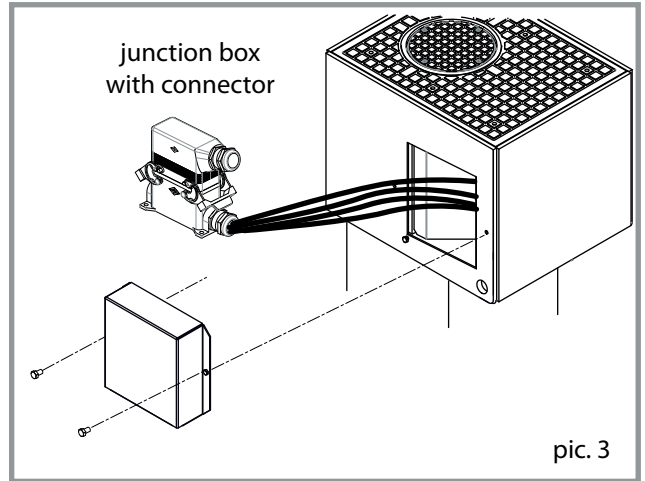
POSSIBLE FUNCTIONING TEST (non mandatory for the installation)
Talos M50 is factory-tested in all normal conditions of functioning, before being sent out to customer.

Nevertheless, to allow that a few running tests to assess functioning are carried out before the installation, it is possible to access the inner terminal board with the electrical connections by removing the hatch cover: undo the two lateral screws of the cover and pull out the junction box with its connector.

Open the connector and carry out the electrical connections as illustrated in pic. 16 page 12.



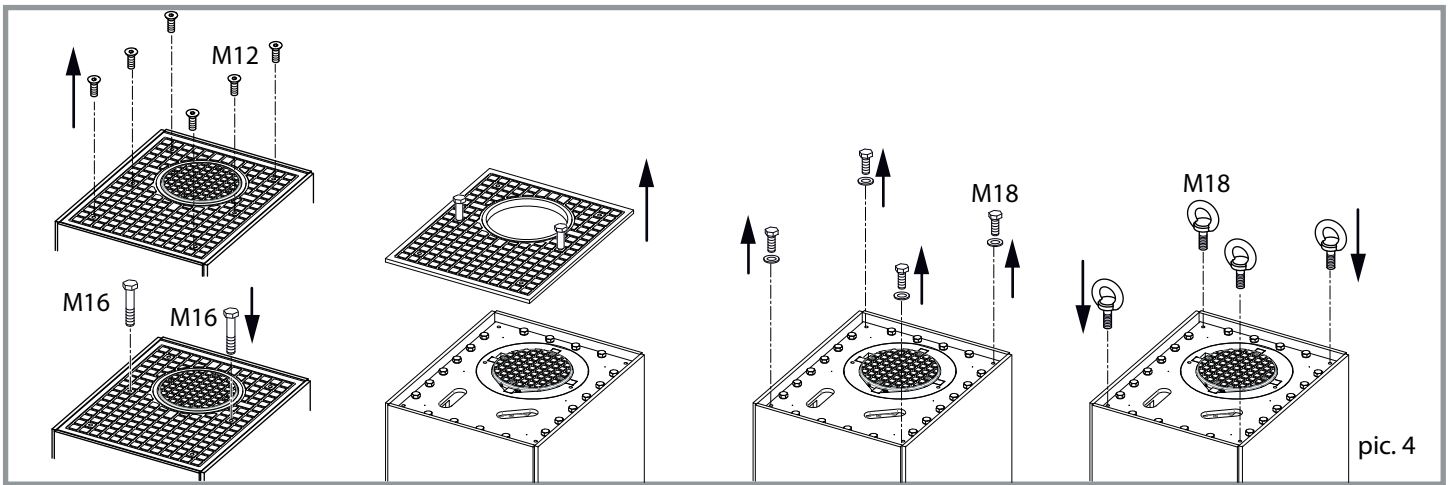
ATTENTION: Once the first running test is finished, fit back the junction box and close back the hatch.



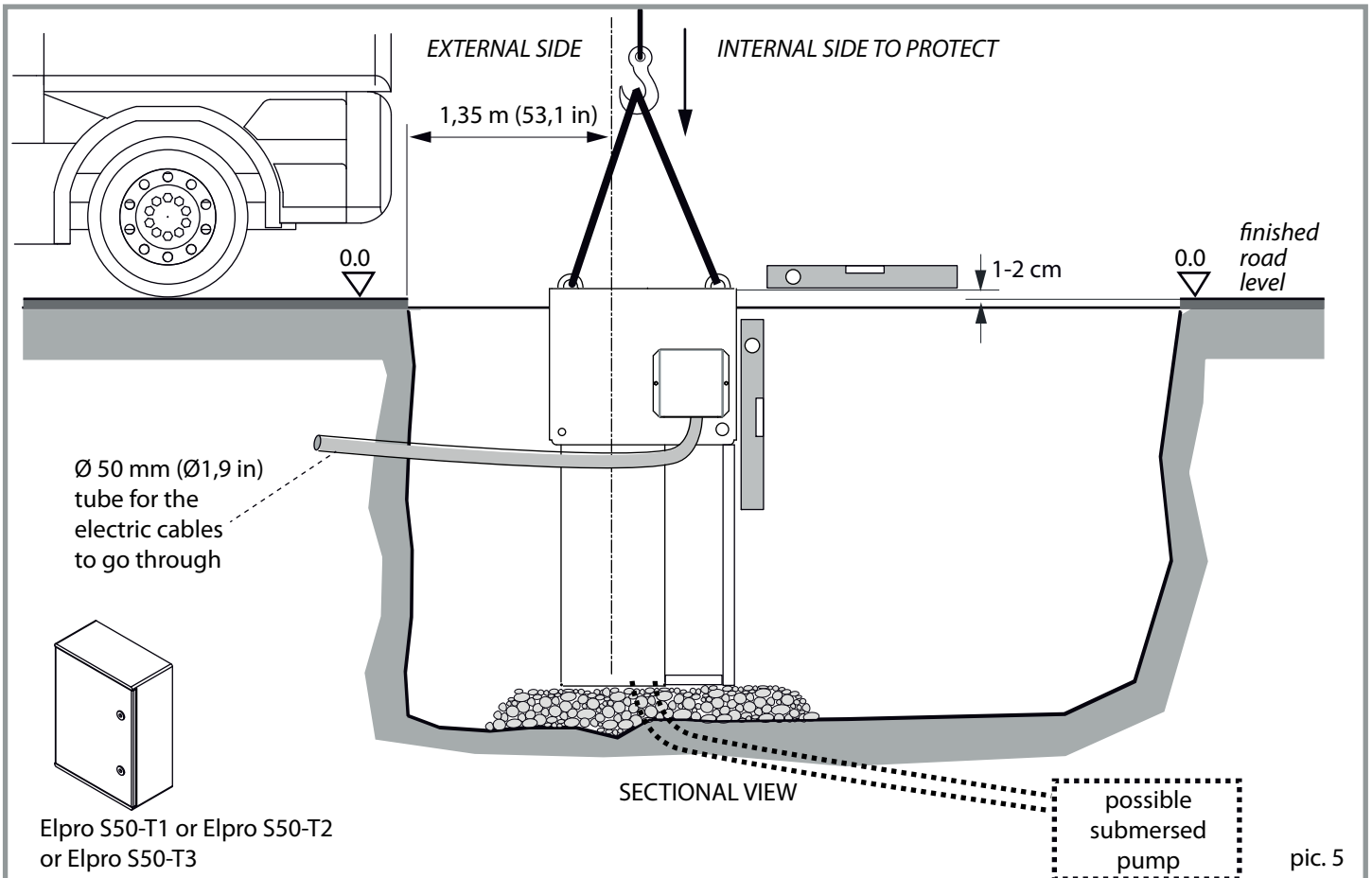
INSERTING THE BOLLARD INTO ITS SEAT

Unscrew the six M12 screws that fix the cover plate and remove it by means of M16 supplied screws.

Remove the four x M18 screws and replace them with the four lifting rings allowing for the bollards to be hoisted.



Position the bollard as indicated in the picture, and use a level to make sure it is in axis.

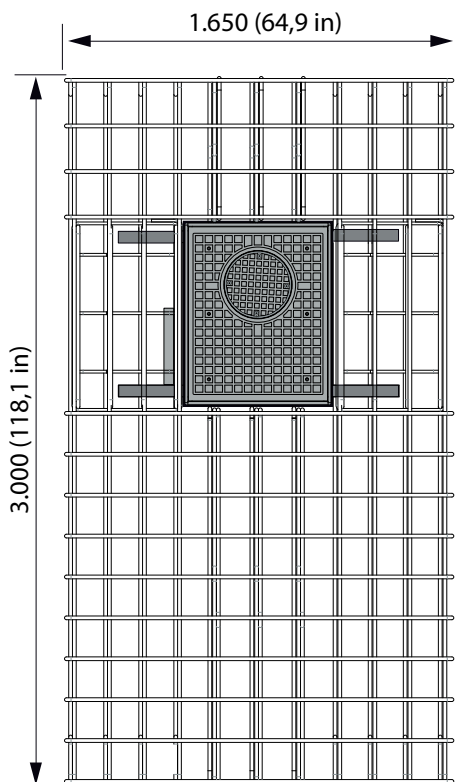
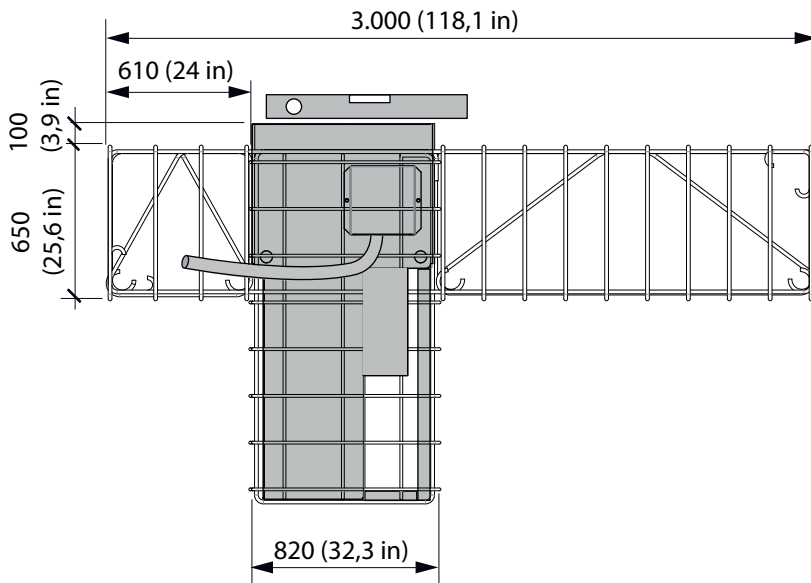
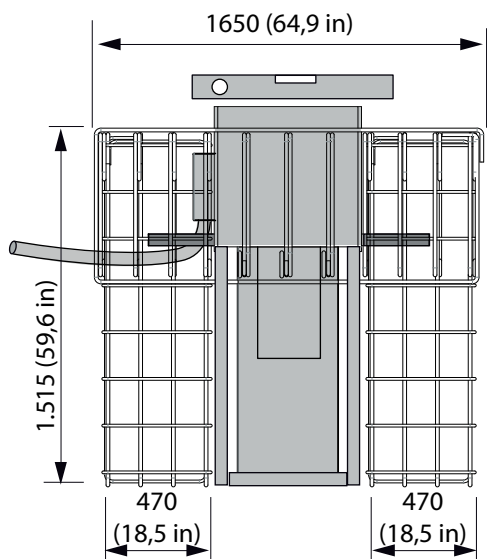


English

CONSTRUCTION OF THE FOUNDATION CAGE TO CEMENT (not provided by the manufacturer)

The foundation cage is to be made on the installation site.

dimensions in millimeters (margin of tolerance of ± 25 mm - (1 in))



TOTAL WEIGHT of iron grid: 350 kg



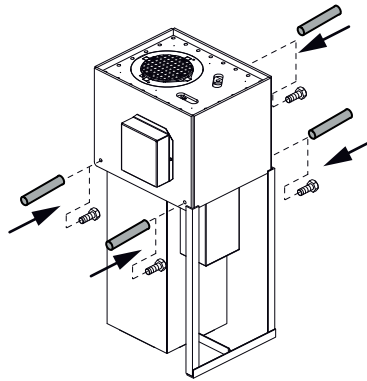
The bollard is to be positioned and levelled on plane before casting concrete around the foundation cage



The steel framework is to be class B450C (ASTM A615 Grade 60) made of ribbed bars, yield point ≥ 450 MPa and breaking point ≥ 540 MPa



- Fix the roll-over bars into the holes in the ground casing with screws .



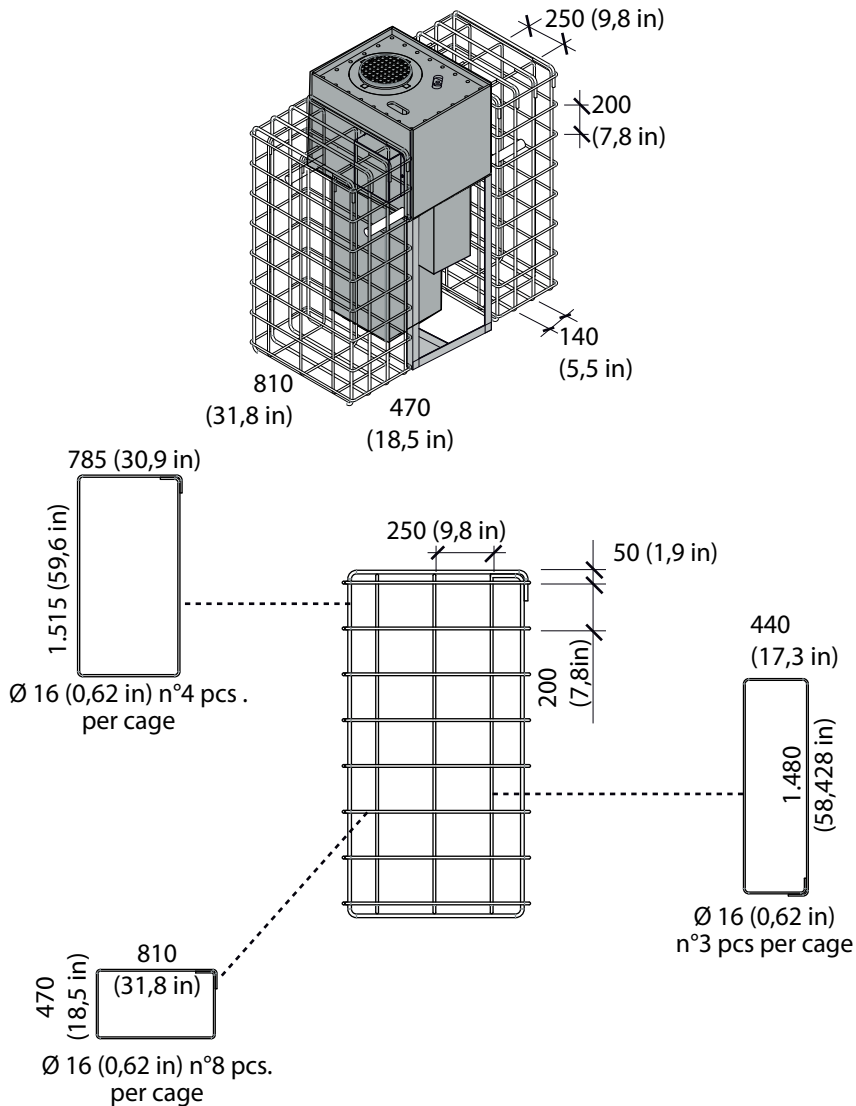
300 (11,8 in) M18x35 TE
n°4 pcs.
Ø 50 mm (1,18 in)
n°4 pcs.
(supplied)

pic. 7



Joining of the cages and of the entire steel framework can be made by steel wire or welding

n°2 lateral cages

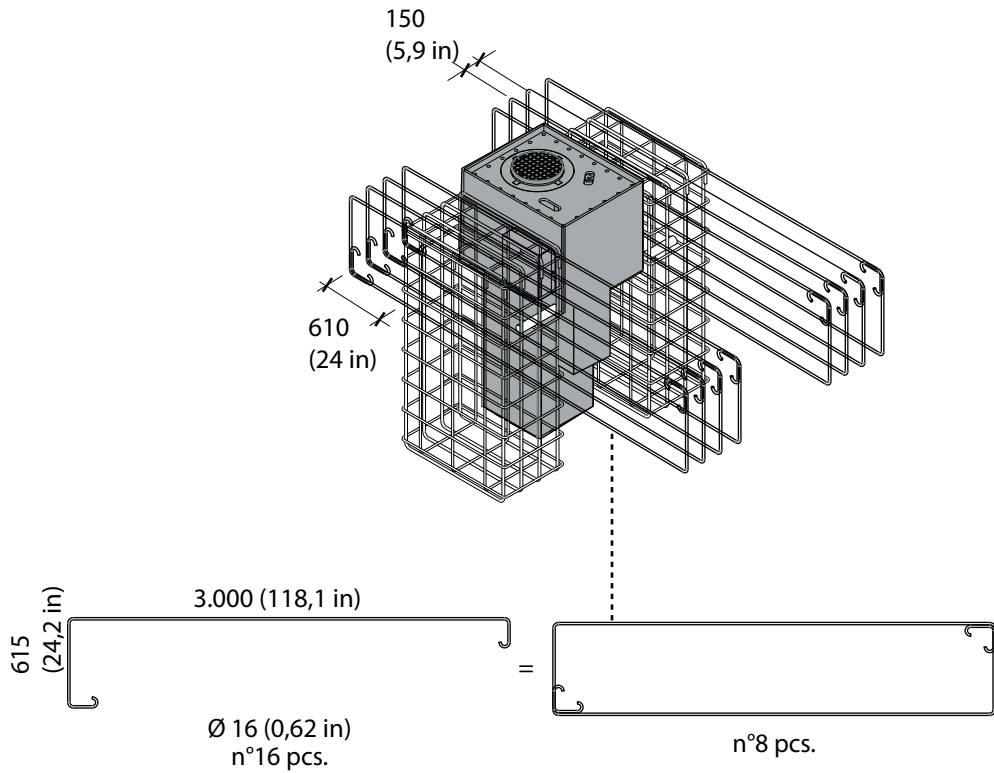


pic. 8



Joining of the cages and of the entire steel framework can be made by steel wire or welding

nos. 8 Longitudinal rectangular rebar rings

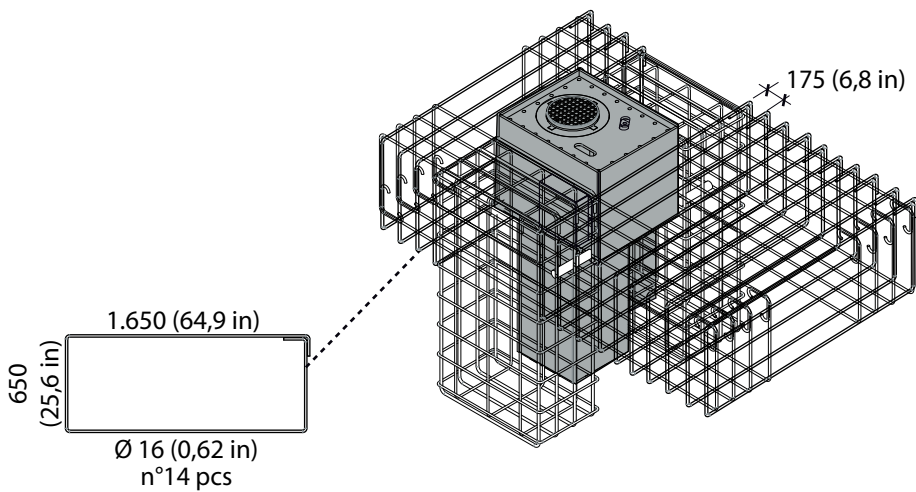


pic. 9



Joining of the cages and of the entire steel framework can be made by steel wire or welding

nos. 14 Transverse rectangular rebar rings



pic. 10