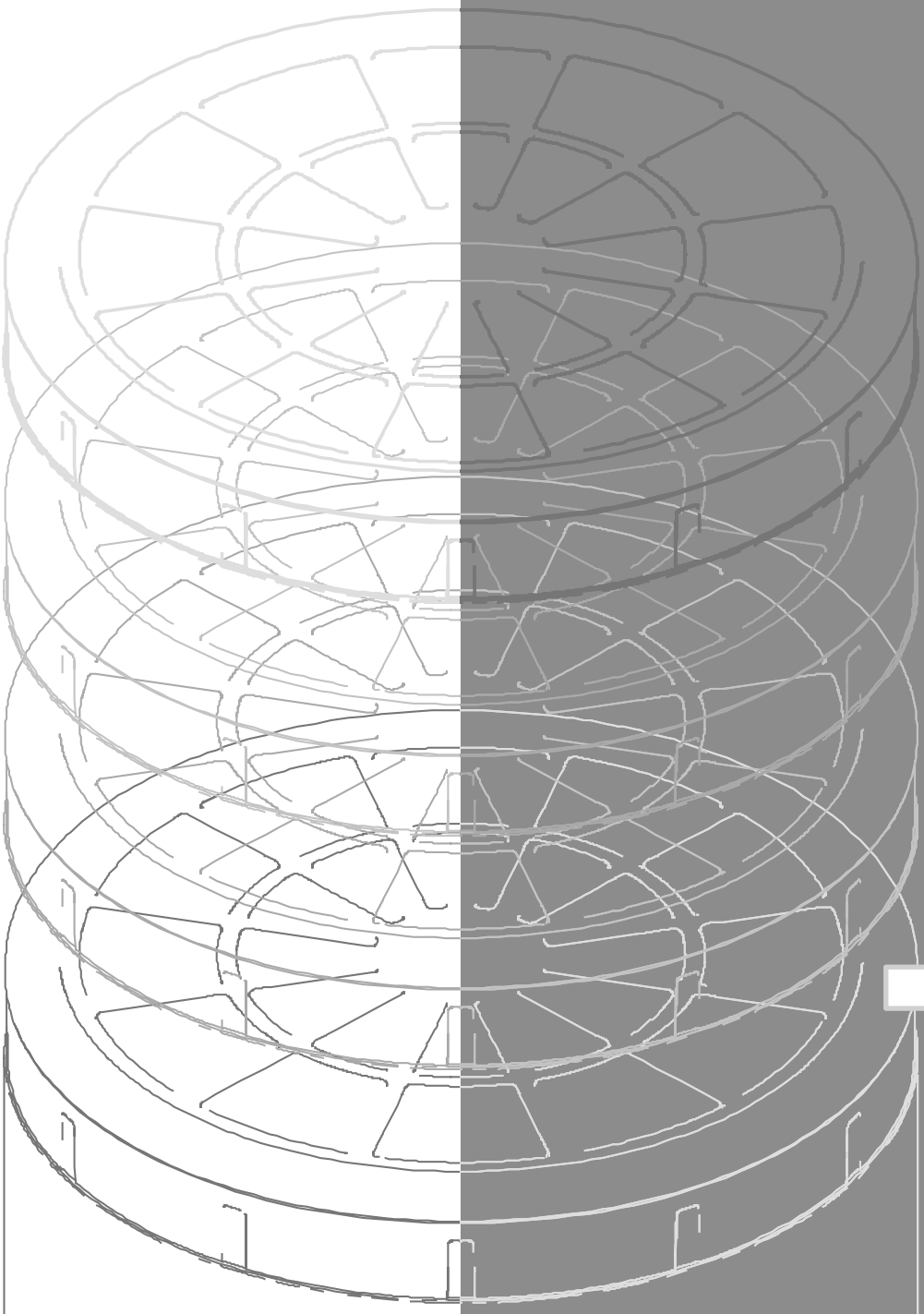
Luxor
Automatic bollards

Installation, Use & Maintenance



English **EN**

URBACO
AUTOMATIC BOLLARDS

CONTENTS

"IMPORTANT INSTALLATION, SAFETY INSTRUCTIONS"
"CAUTION: IMPROPER INSTALLATION MAY CAUSE SERIOUS DAMAGE, FOLLOW ALL INSTALLATION INSTRUCTIONS CAREFULLY"
"THIS MANUAL IS ONLY FOR PROFESSIONAL OR QUALIFIED INSTALLERS"

1 Legend of symbols

This symbol tells you to read the section with particular care.
This symbol tells you that the sections concern safety issues.
This symbol tells you what to say to the end-users.

2 Intended use and Limits to use

2.1 Intended use

This product is engineered and built exclusively to serve as explained in this technical manual.
Any other use is wrongful and thus dangerous.
Anything that is not described in these instructions must be considered as dangerous.
URBACO refuses any liability deriving from the wrongful use of the system.

2.2 Limits of use

Do not allow people or animals to linger in the vicinity of the bollard while it is in motion.
Keep transmitters and any other command device out the reach of children, to prevent operator from being activated by accident.

3 Reference Standards

The product in question complies with the following standards:

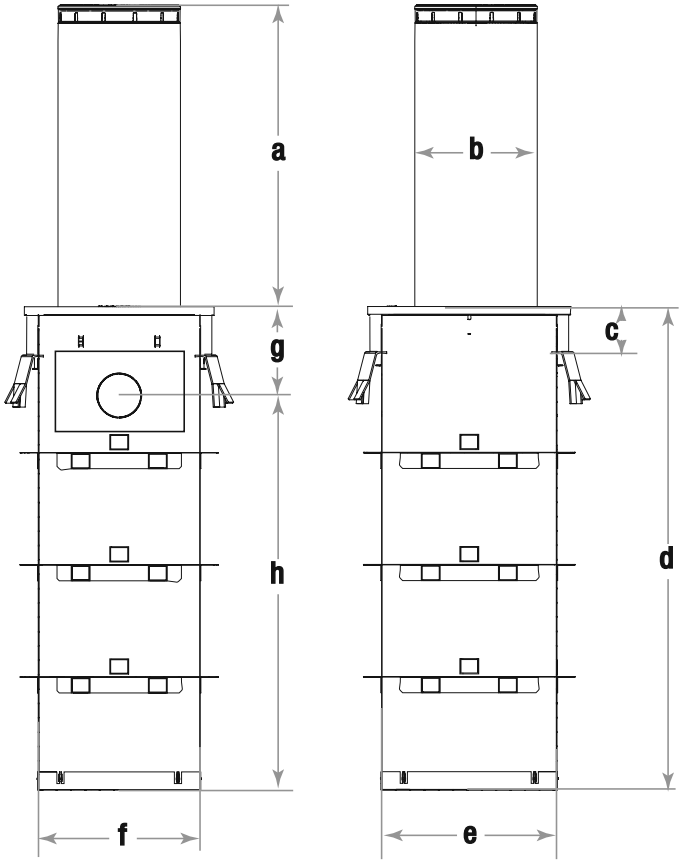
See par. 10 – Declaration of Conformity – p. 17.

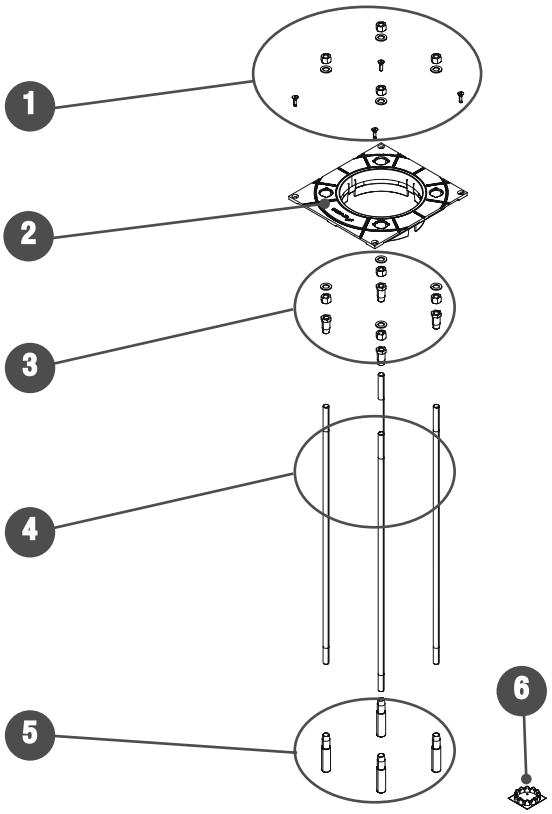
4 Description

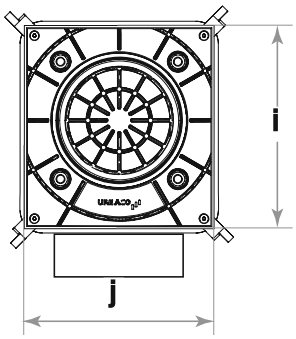
4.1 Bollard – technical features

	BPLUXE60	BPLUXF60	BPLUXG60	BPLUXE80	BPLUXF80	BPLUXG80
Weight	68 Kg	78 Kg	89 Kg	76 Kg	89 kg	101 Kg
Time to surface	Adjustable					
Time to descent	4 s	3.5 s	3 s	5 s	4.5 s	4 s
Operating temperature	-20°C / +70°C					
Working pressure	6/8 bar					
Maximum opening force	1918 N	1800 N	1682 N	1867 N	1727 N	1500 N

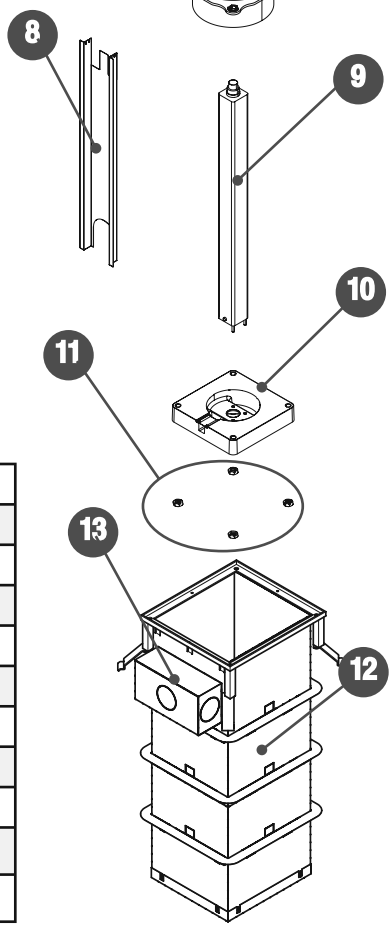
4.2 Description of bollard parts







1	Closing nuts and bolts
2	Cover
3	Upper centering tubes and blocking counter nuts
4	Tension rods
5	Lower centering tubes
6	Light unit
7	Body of the bollard
8	Cable stopper plate
9	Pneumatic piston
10	Securing base
11	Tension rod blocking nuts
12	Lost casing
13	Expanding recess (Cable holder)

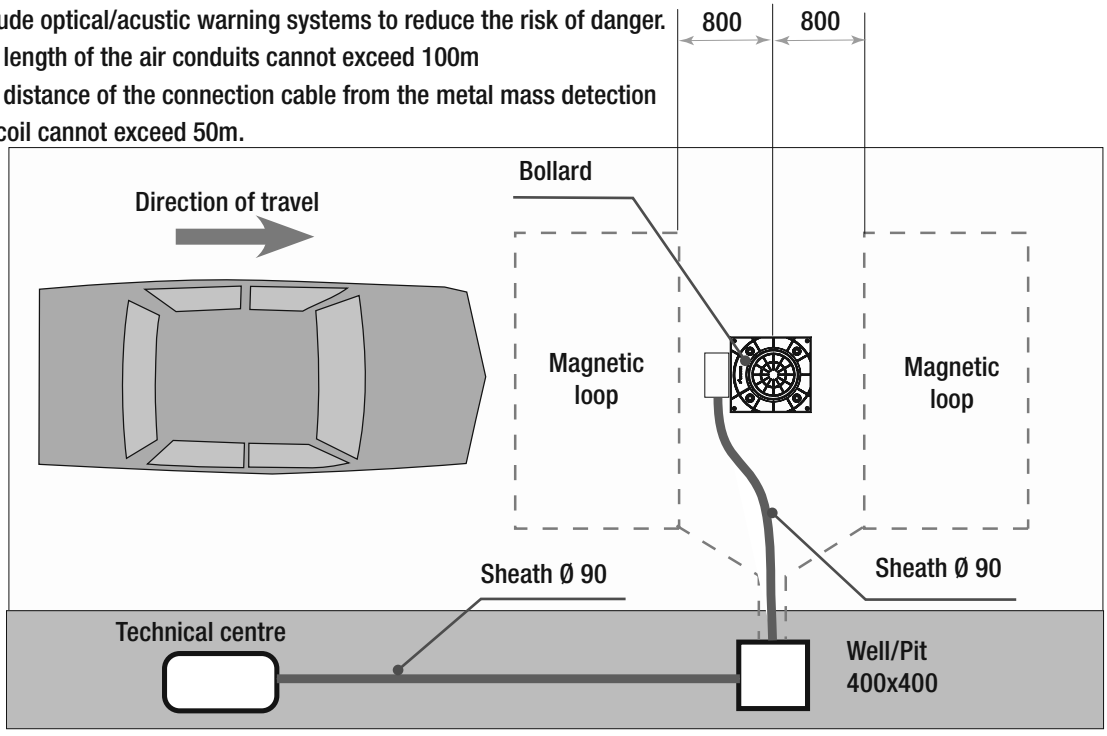


	BPLUXE60	BPLUXF60	BPLUXG60	BPLUXE80	BPLUXF80	BPLUXG80
a	600	600	600	800	800	800
b	200	273	320	200	273	320
c	135	135	135	135	135	135
d	878	878	878	1078	1078	1078
e	393	393	413	393	393	413
f	363	363	383	363	363	383
g	197.5	197.5	197.5	197.5	197.5	197.5
h	680.5	680.5	680.5	880.5	880.5	880.5
i	452	452	473	452	452	473
j	422	422	443	422	422	443

5 Preparing the site / location

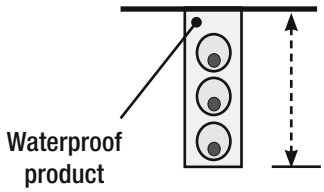
5.1 Preliminary checks

- Check that there are no tubes or other impediments to the digging and laying operations./ Check that no conduits or other obstacles shall prevent from excavating and installating operations
- Check the bearing and consistency of the soil./ Check the soil consistence and its loading capacity
- Include an omnipolar switch on the automation's power grid, having an opening distance of the contacts that is equal or greater than 3mm./ On the power supply line provide an omnipolar disconnecting device with an opening distance between contacts equal to or larger than 3 mm. We suggest using a 10A ominipolar cut off device./ We recommend you to use a 10 A omnipolar disconnecting device.
- There must not be any obstacles that could prevent the normal movement of the bollard./ Remove any obstacle that can prevent the bollard form a normal operating mode.
- Position the technical centre so that it is protected from possible impacts.
- Include tubing for connections.
- If needed, include optical/acustic warning systems to reduce the risk of danger.
- The maximum length of the air conduits cannot exceed 100m
- The maximum distance of the connection cable from the metal mass detection sensor and the coil cannot exceed 50m.



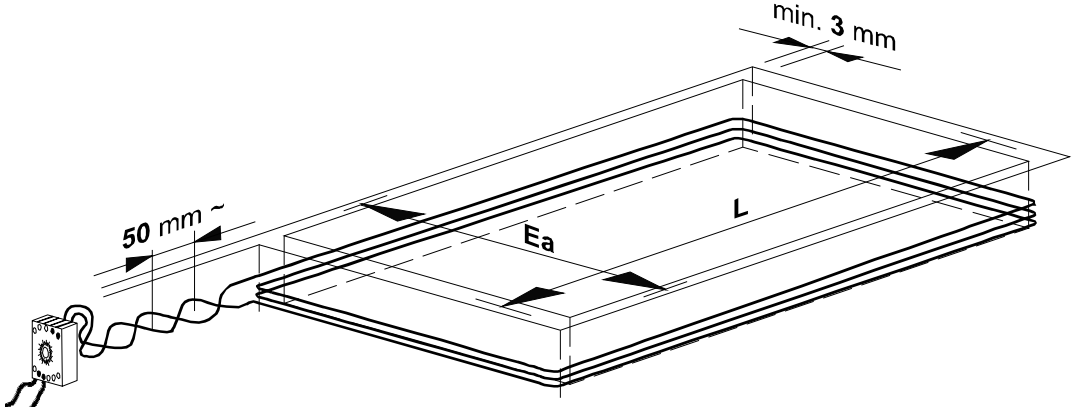
Example for establishing the number of turns: the antenna holder is defined as the surface of coil multiplied by the number of turn and cannot ever exceed NA=20.
For example if the L = 2m, Ea = 1m and the number of turns is 4, then NA = 2 x 1 x4 =8 < 20.

Surface	Number of turns
< 3 m²	4
3 - 5 m²	3
6 - 10 m²	2



30-50 mm depending on the number of cable turns

Clean and leave to dry the drain grooves before inserting the cable.



EN English

5.2 Tools and materials

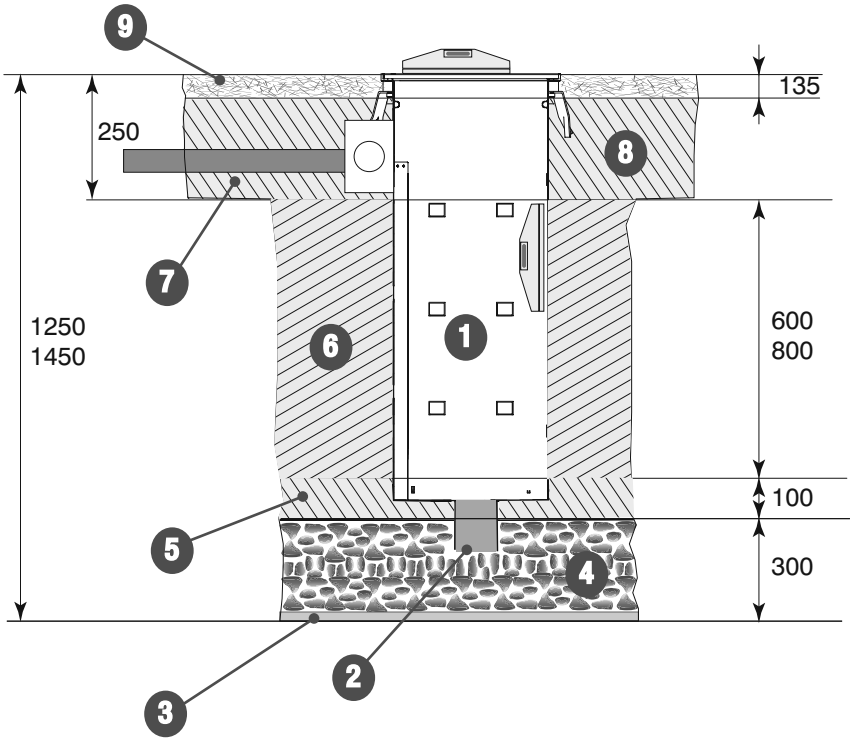
TOOLS: Make sure you have all the proper tools handy to make the installations in total safety and according to current legislation, we suggest handling the bollard using the proper lifting equipment.

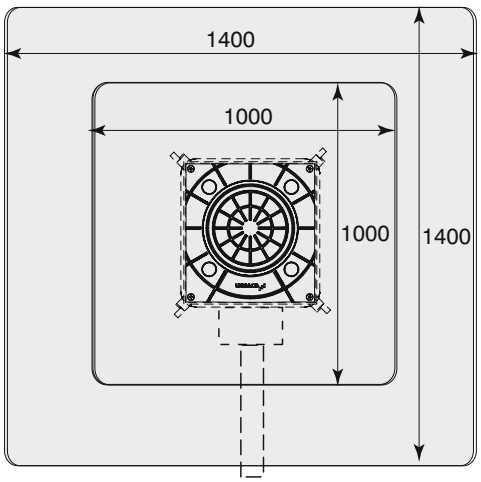
MATERIAL: Make sure you have all the materials needed for installation. Examples of the more important ones follow:
-* CHARACTERISTICS OF THE CEMENT TYPES
ADHESIVE: it is best to use artificial Portland cement free of components such as CPA 325. AGGREGATES: 10/20 calibre are composed of limestone or silicon which are free of salts and clays.
PLASTICITY: the cement employed shall have to resist plastic deformations, the lowering onto the Abrams cone shall be between 4 and 7 cm for a conical, trunk mold 30 cm tall, having a diameter of 10 cm in the high part and of 20 cm in the low part, which is filled in four layers. DOSAGE= 350kg/m3.
DRAINAGE GRAVEL: use gravel that has a grain size of between 10 and 20 mm.
CHARACTERISTICS OF THE STEEL
HLE steel exclusively. For any steel used, consider:
- the nature of the steel and its carbon content.
- the geometrical characteristics of the sections (a parameter which defines the shape of the section).
- the adhesive characteristics.
- the guaranteed mechanical characteristics.
- the suggested use; the curvature, working, and welding factors.
- the suggested use; the curvature, working, and welding factors.
- the class (e.g. Fe E 40 A)

When employing the steel, respect the suggestions of the manufacturer and the dimensions according to specifications and requirements.

5.3 Overall dimensions, distances and tracing for the trenching.

Depending on the type of ground: cut the road surface using a disc, or remove the surface. Study the drawings below to determine the dimensions and depth of the trenching perimeter, depending on the bollard model.
When laying several bollards we suggest performing a single trench taking into account the distances and pitch between the bollards.





1	Lost casing
2	Ø100 PVC drainage tube
3	Geo-textile fabric
4	Drainage gravel
5	First layer of cement (prefixing)
6	Second layer of cement
7	Tubo corrugato Ø 90
8	Third layer of cement
9	Road surface or pavement

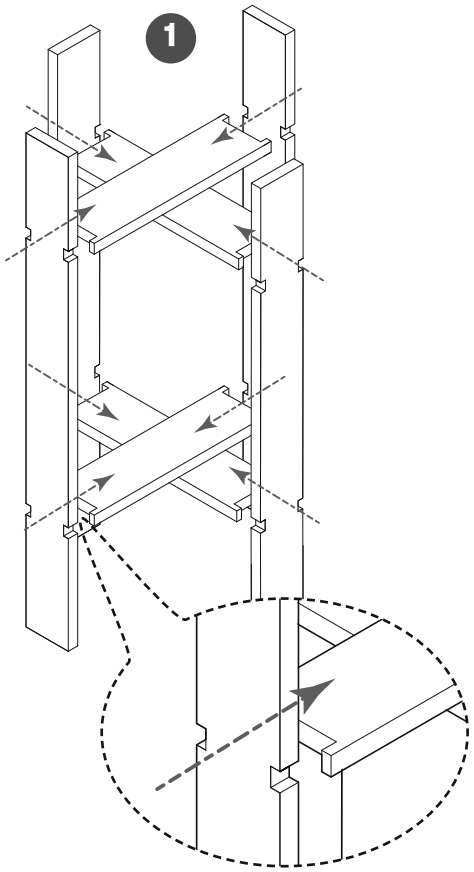
5.4 Trenching and laying the lost casing

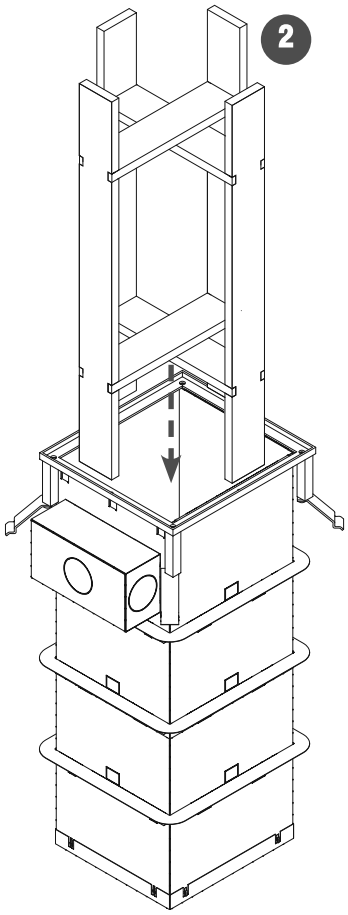
5.4.1. Mounting the support structure

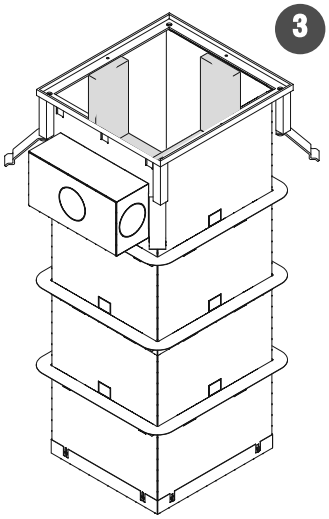
Before starting any trenching operations, we suggest mounting the lost casing (as explained in the leaflet included with the same).

To avoid sagging and deformations during the casting phase, we supply a wooden support structure.

Mount it as shown, and insert it inside the lost casing.

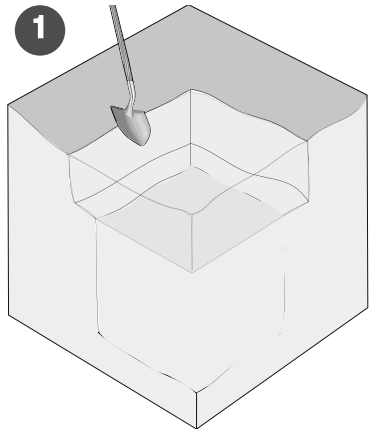






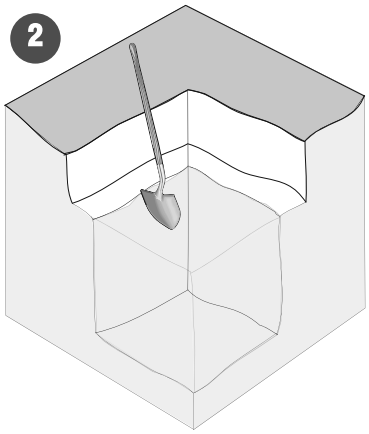
5.4.2. Trenching and laying the box.

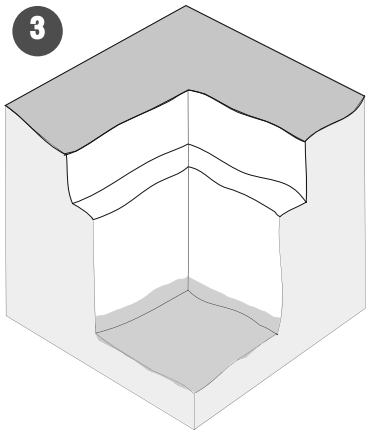
After removing the road surface, trench using suitable tools. Respect the dimensions mentioned in Chapter 5.3.



Depending on the type of soil: cut the road surface using a disc, or remove the road surface, and dig the first 1400 mm x 1400 mm trench, having a depth of 250 mm.

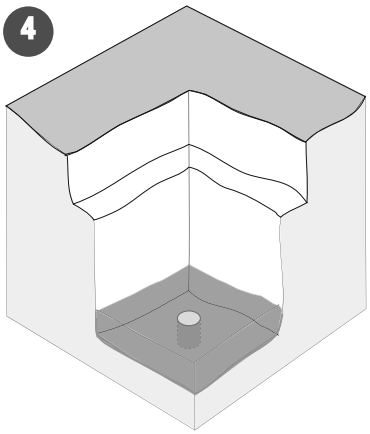
Continue digging a trench of about 1000 x 1000 mm that is 1000 / 1200 mm deep, depending on the height of the bollard.

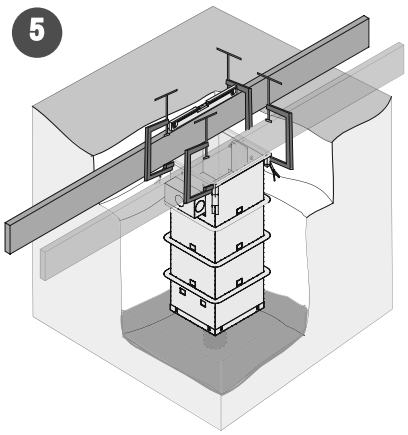




Once the digging is finished, lay geo-textile fabric on the bottom, which limits sinking into the gravel over time.

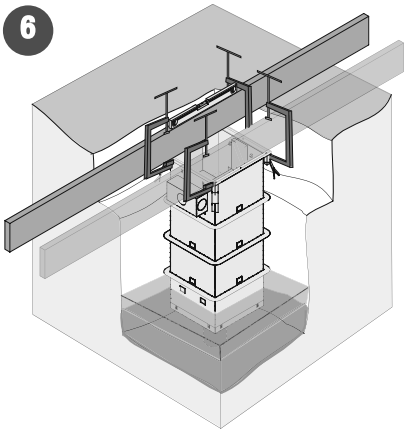
Fill up with gravel that is 300 mm thick, and in the centre, place a Ø 100 PVC drain tube (hole in the lost casing must be placed above the PVC tube).





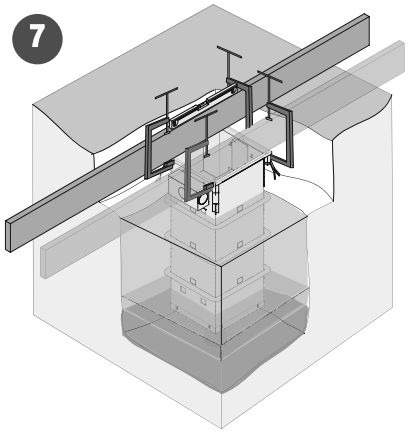
For easier laying of the lost casing, we suggest anchoring it to some cross bars, and using a level gauge and shims, adjust the box perfectly.

6



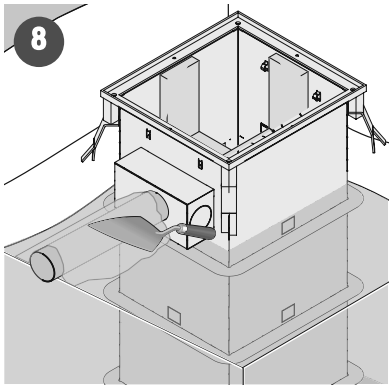
Cast the first layer of 100 mm of cement* (careful to respect the characteristics of the cement) being careful not block the drain pipe.

7



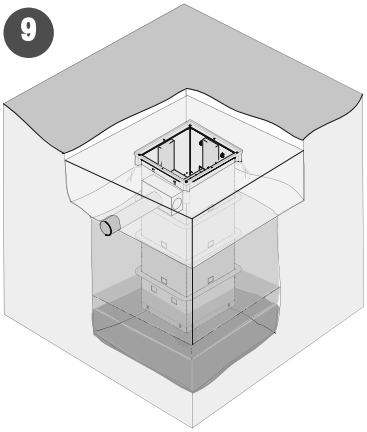
When the first layer of cement is dry, cast the second and fill the entire smaller hole.

8



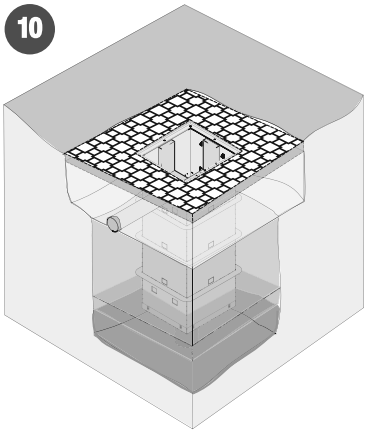
When the second layer of cement is also dry, lay the PVC Ø 100 corrugate cable conduit, making sure it adheres perfectly to the hole in the box. Fix it using cement .

9



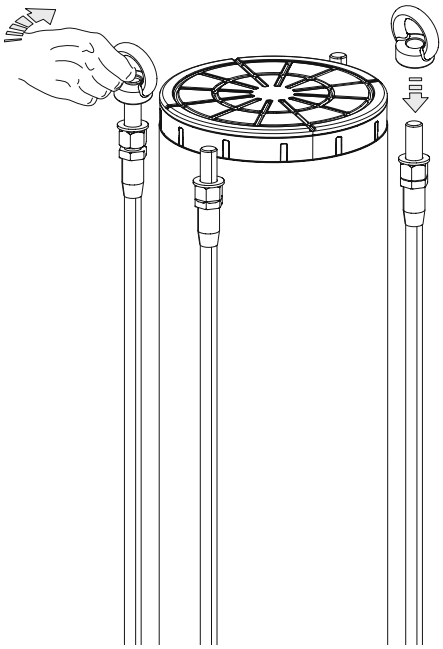
Continue casting until you get to about 85 mm from the surface (if you wish to lay particular flooring see fig. 10) otherwise keep casting until the cement reaches the edge of the box.

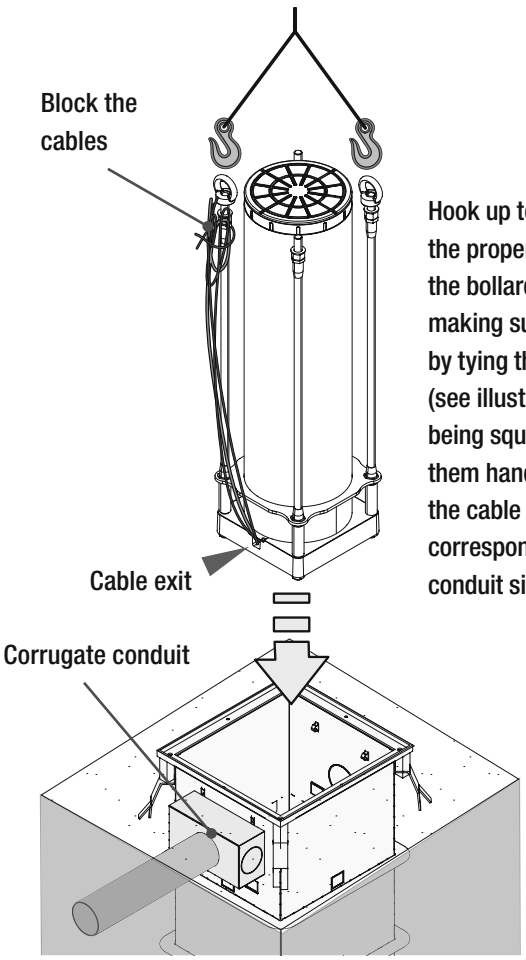
10



5.5 Laying and connecting the bollard

Screw the M20 female eye bolts diagonally onto the rods as shown in the illustration.
This operation is needed for the later hoisting of the bollard (using the appropriate equipment) to insert it into the box cemented into floor.

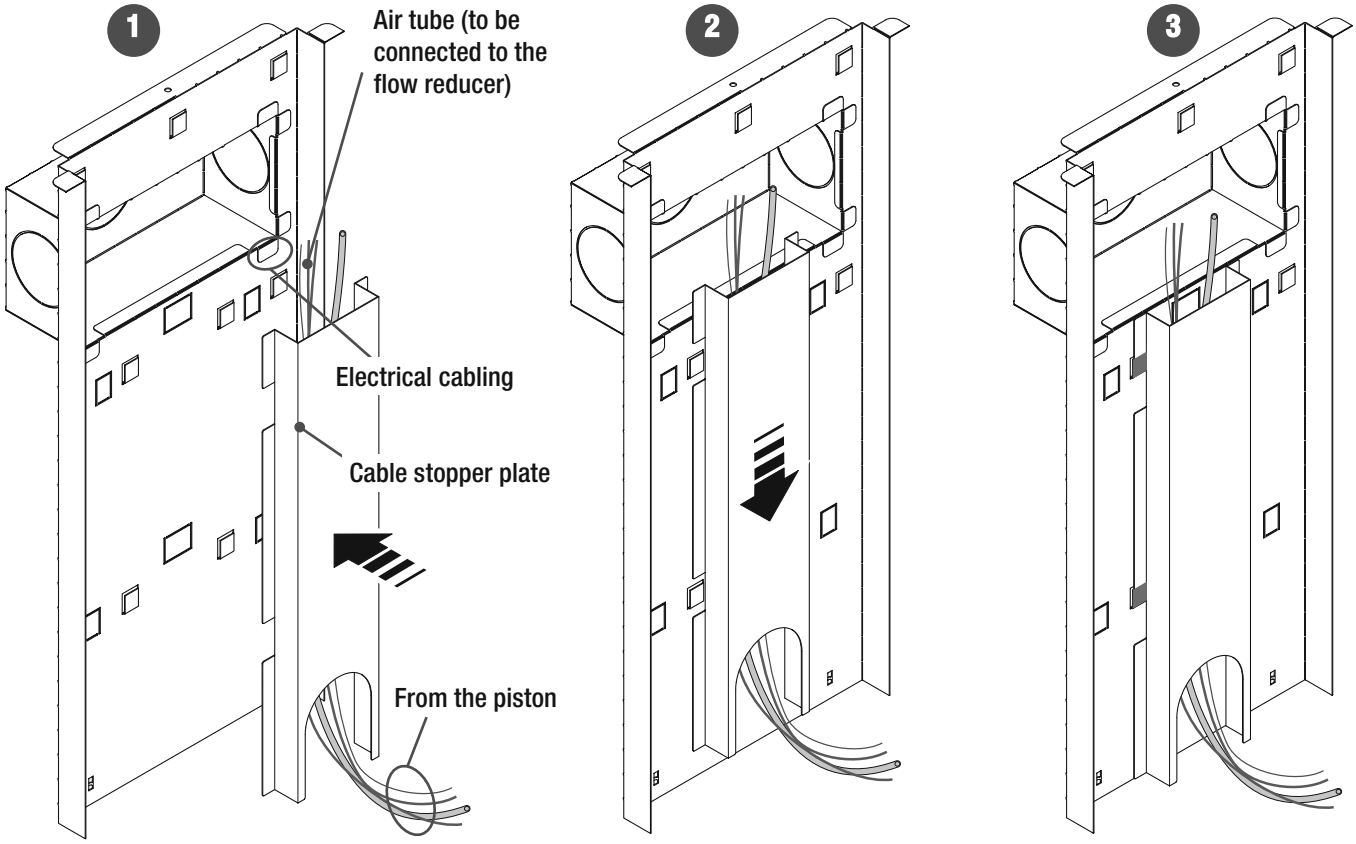




Hook up to the eye bolts and using the proper hoisting tools insert the bollard into the lost casing, making sure to block the cables by tying them to one of the rods (see illustration), to prevent from being squashed, and to also have them handy later on. Be careful that the cable exit side on the bollard corresponds to the corrugated conduit side.

- 5.5.2. Hooking up the cable stopper plate.

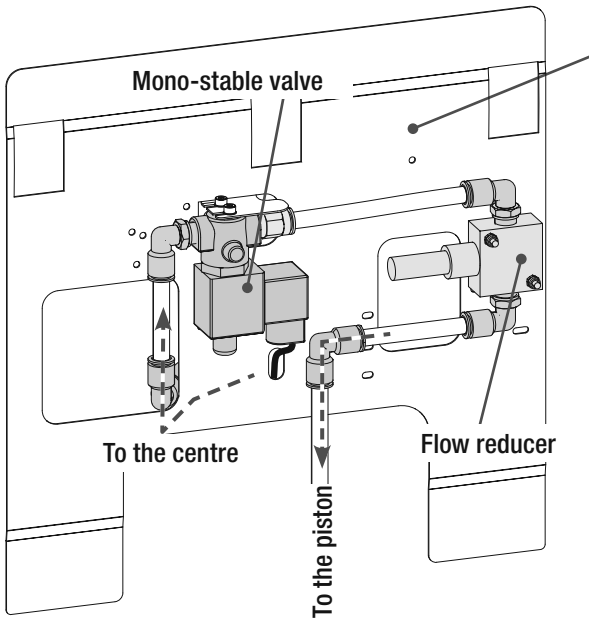
Before hooking up the cable stopper plate, pass all the pneumatic and electrical cables behind (fig. 1), rest the plate against the wall of the lost casing (fig. 2) and make it slide downward until it hooks up (fig. 3).



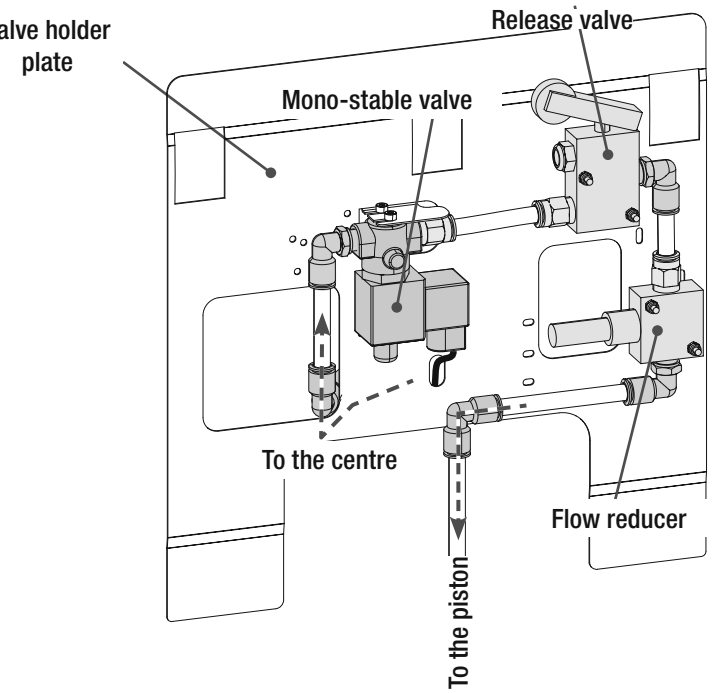
5.6 Preparing the valve holder plate

Here are the mounting diagrams for the valva holder plate, depending on the installation you have chosen.
N.B. for the pneumatic cabling use DIN 74324 Ø 10x8 tubes

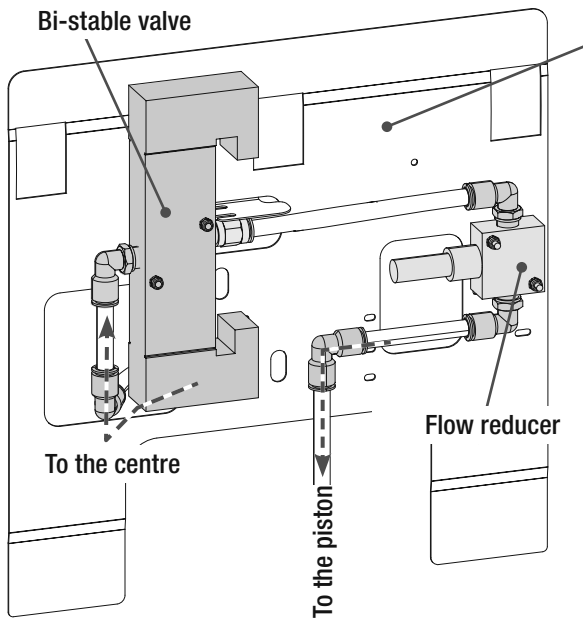
Positive safety electrovalve



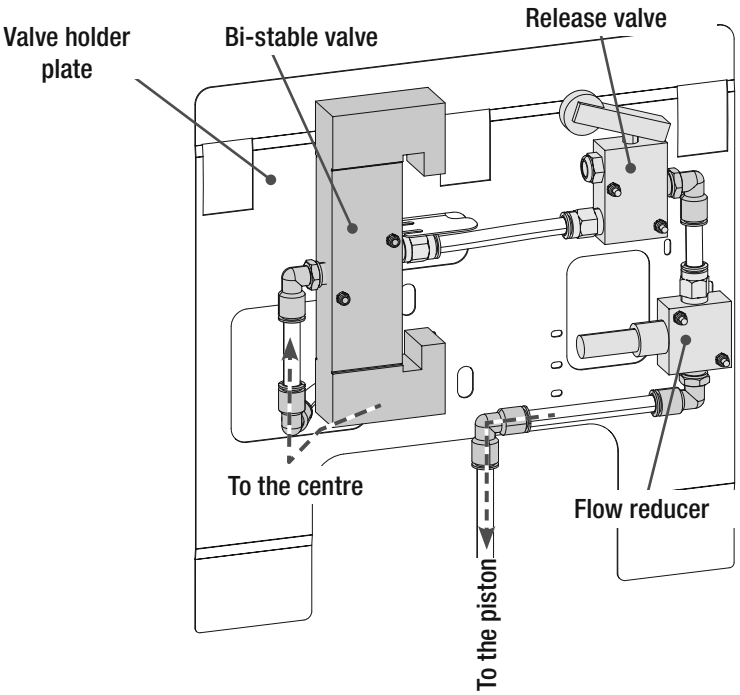
Positive safety electro-valve + mechanical release (optional)



Negative safety solenoid valve (optional)

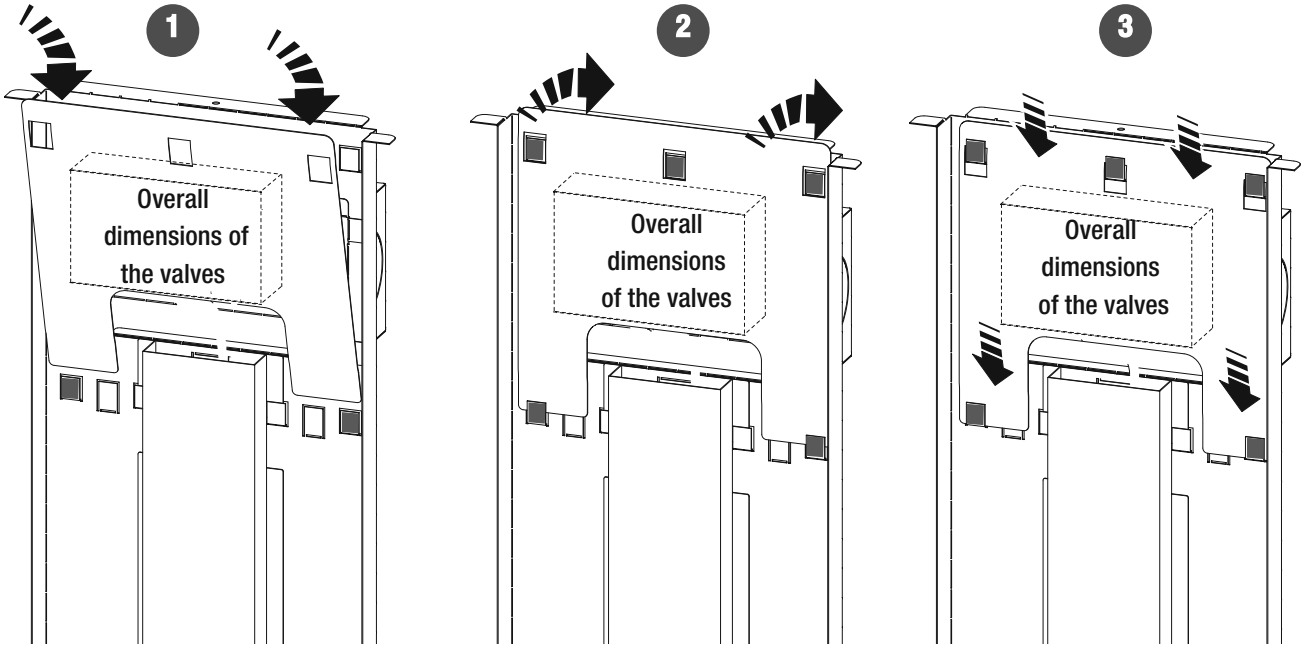


Negative safety solenoid valve * Mechanical release (optional)



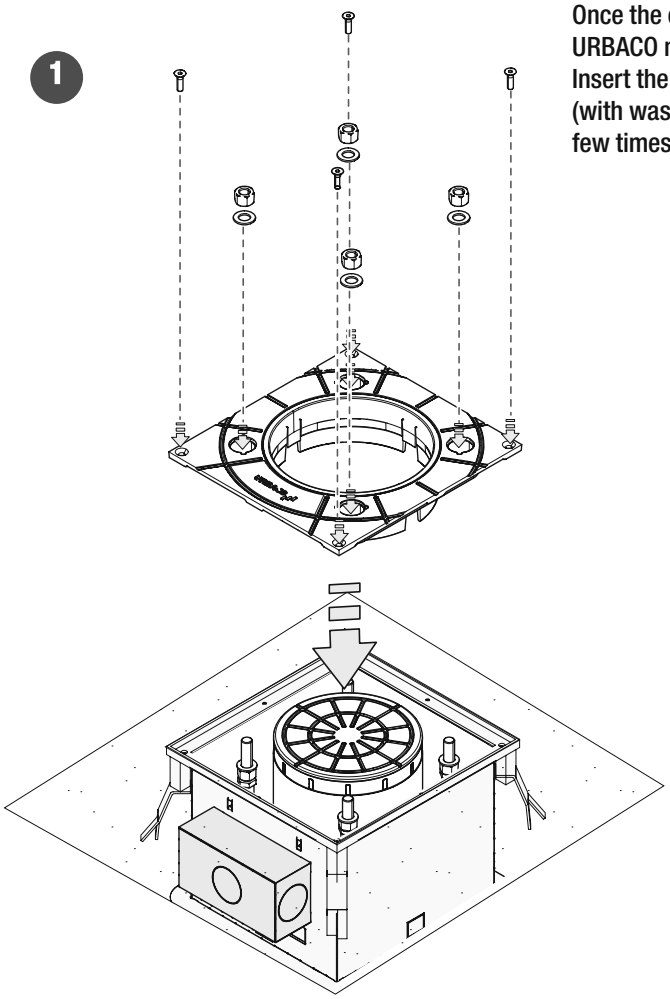
5.7 Hooking up the valve

Before inserting the valve holder plate, we suggest performing all electrical connections and setting up the proper measurements of the pneumatic ones, so that they can be easily connected to the plate once it is in place. To hook up the valve holder plate, lean the lower part of the plate on the apposite wings (fig. 1) and make it adhere to the wall of the lost casing (fig. 2). Make it run downwards to hook it up as shown in fig. 3.



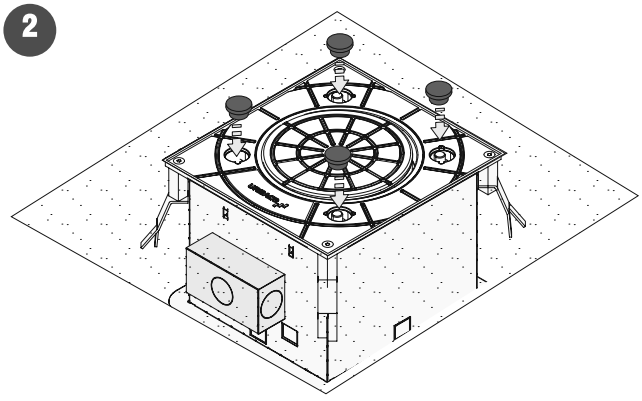
5.8 Closing the bollard

1



Once the connections are done, fix the cover, by placing it so that the URBACO name is on the cable side.
Insert the M12x35 flush screw as shown and screw on the bolts (with washers) without tightening them.Make the bollard go up and down a few times and tighten the nuts when the piston is in the up position.

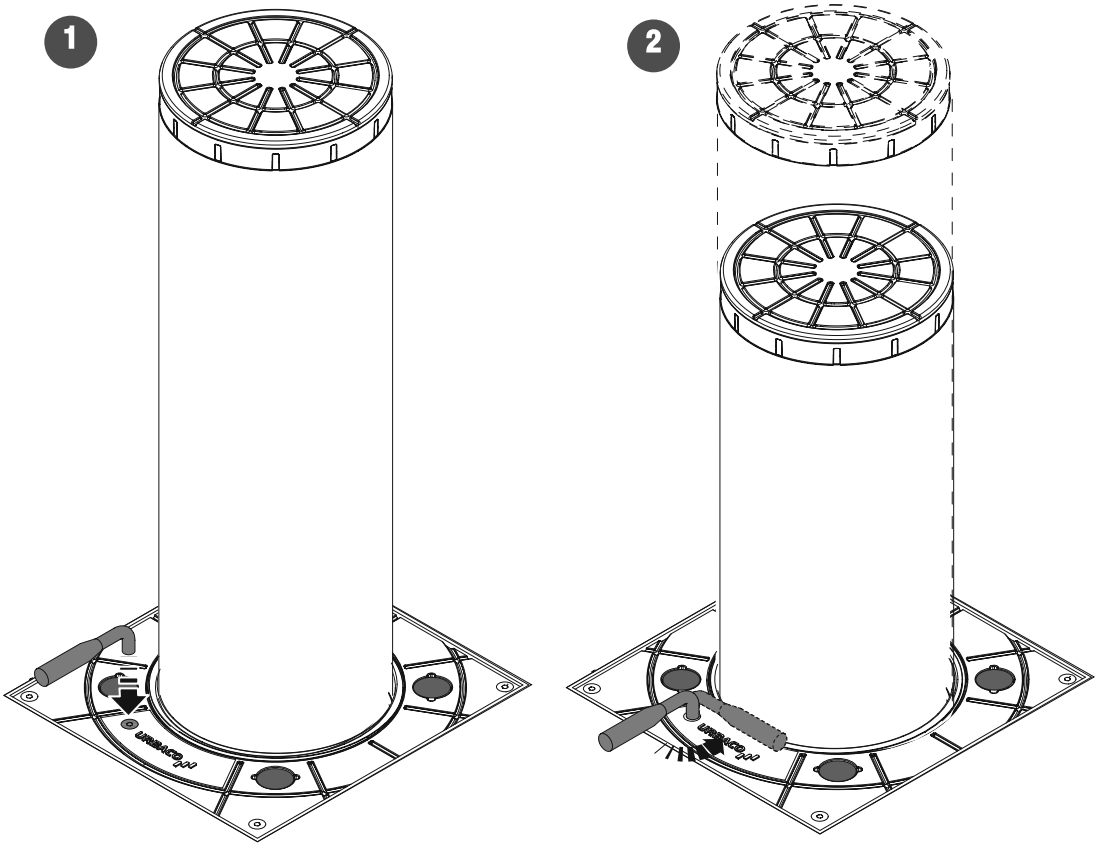
2



Cover the nut holes, using the apposite caps.

6 Release the bollard (if installed)

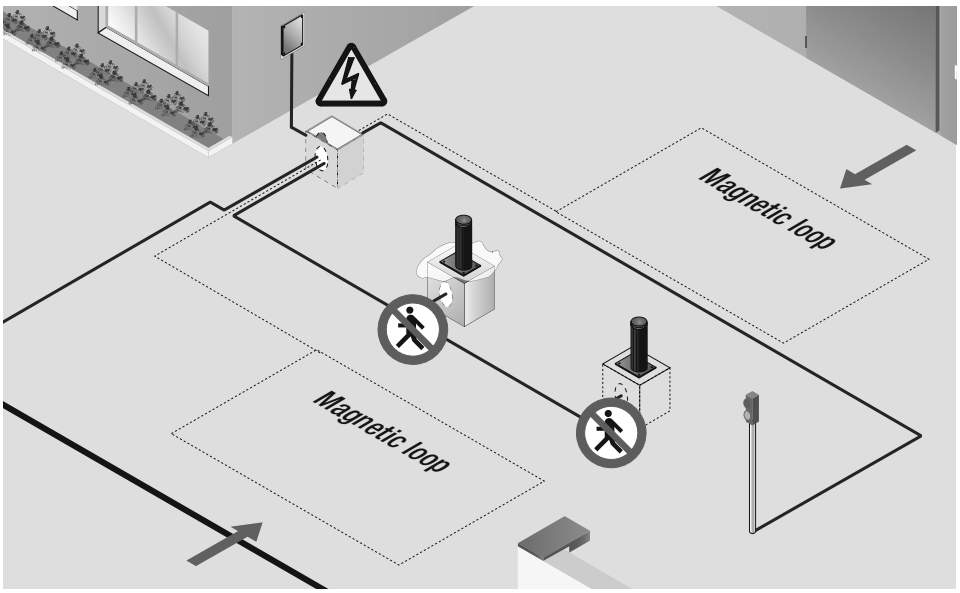
To activate the bollard release (if included, being that it is optional) insert the issued key in the apposite hole, see fig. 1 and turn the key counter-clockwise. The bollard begins to descend (fig. 2)
N.B. : if the installation is under pressure, by raising the lever to its initial position, the piston will rise.



7 Safety instructions

Important safety instructionsù

This product must only be employed for its originally intended use. Any other use is wrong and potentially dangerous.
The manufacturer cannot be held liable for any damages resulting from wrongful, erroneous or negligent uses. Do not step within the reach of the automation while it is in operation. Do not exercise force against the motion of the operator as this could result in potentially dangerous situations. Do not allow children to play or linger within reach of the automated device.
Keep transmitters and any other command device out the reach of children, to prevent operator from being activated by accident.



In the event of anomalous behaviour, stop using the operator immediately. Provide for adequate safety systems such as magnetic loops, traffic lights or any device that shall prevent dangerous situations.

Danger! High voltage

No transit during operation

EN English

8 Maintenance

8.1 Periodic maintenance

- Before performing any maintenance procedures, cut off the main power, to prevent possible accidents due to gate movement.

Check point	Check and maintenance	month	2° month	3° month	4° month	5° month	6° month	7° month	8° month	9° month	10° month	11° month	12° month
1	Compressor functioning						x						x
2	Cleaning of the centre						x						x
3	Endstop sensors						x						x
4	Solenoid valve						x						x
5	No air leak						x						x
6	Cooling fans						x						x
7	Heating unit						x						x
8	Automatic drainage functioning						x						x
9	Metal detecting loops						x						x

8.2 Trouble shooting

MALFUNCTIONS	POSSIBLE CAUSES	REMEDIES
The solenoid valve is supplied (check it by using a voltmeter) but the bollards doesn't move upwards.	The air doesn't come to the solenoid valve	Check the compressor and the air circuit
	The flux regulator is closed	Open the flux regulator
	Solenoid valve winding has burnt out	Change the winding
The bollard surfaces in an irregular manner./ The bollard move upwards irregularly	Presence of foreign bodies on the guide	Check the guides status. Clean.
	Air pressure is not sufficient	Check and adjust the pressure of the pressure-switch (6 – 8 bar).
The bollard surfaces, but stops before reaching the final up position.	The cover was placed wrongly.	Check the position of the cover.
	There are foreign objects in the guide.	Check the condition of the guides. Clean and lubricate.
The bollard descends but stops before the down position.	There is a foreign object under the carriage or under the bollard head.	Clean the bottom of the casing and the lower part of the bollard head.
The compressor works too frequently.	Air leak.	Check the flexible air tube and the couplings (if needed use foam spray to detect leaks).
	Air leak at the solenoid valve release.	Purge the circuit and clean (or replace) the electrovalve (foreign objects in the air circuit).
	The pressure is too high.	Check that pressure switch (6 – 8 bar when working).

8.3 Log of interventions

Check point	Checking and maintenance	YES	NO	Other operations performede
1	Securing the cover			
2	slide ring			
3	Endpoint sensors			
4	Electrovalve			
5	No air leaks			
6	Draining efficacy			
7	Positioning the cover			
8	Luminous crown			
9	Metal mass detection coils			

Installers stamp	Date of intervention
	Operator's name
	Technician's signature
	Firma committente

Check point	Checking and maintenance	YES	NO	Other operations performede
1	Securing the cover			
2	slide ring			
3	Endpoint sensors			
4	Electrovalve			
5	No air leaks			
6	Draining efficacy			
7	Positioning the cover			
8	Luminous crown			
9	Metal mass detection coils			

Installers stamp	Date of intervention
	Operator's name
	Technician's signature
	Firma committente

Check point	Checking and maintenance	YES	NO	Other operations performede
1	Securing the cover			
2	slide ring			
3	Endpoint sensors			
4	Electrovalve			
5	No air leaks			
6	Draining efficacy			
7	Positioning the cover			
8	Luminous crown			
9	Metal mass detection coils			

Installers stamp	Date of intervention
	Operator's name
	Technician's signature
	Firma committente

8.3 Registro interventi

Check point	Checking and maintenance	YES	NO	Other operations performede
1	Securing the cover			
2	slide ring			
3	Endpoint sensors			
4	Electrovalve			
5	No air leaks			
6	Draining efficacy			
7	Positioning the cover			
8	Luminous crown			
9	Metal mass detection coils			

Installers stamp	
	Date of intervention
	Operator's name
	Technician's signature
	Firma committente

Check point	Checking and maintenance	YES	NO	Other operations performede
1	Securing the cover			
2	slide ring			
3	Endpoint sensors			
4	Electrovalve			
5	No air leaks			
6	Draining efficacy			
7	Positioning the cover			
8	Luminous crown			
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Installers stamp	
	Date of intervention
	Operator's name
	Technician's signature
	Firma committente

Check point	Checking and maintenance	YES	NO	Other operations performede
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	Date of intervention
	Operator's name
	Technician's signature
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Check point	Checking and maintenance	YES	NO	Other operations performede
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3	Endpoint sensors			
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Installers stamp	Date of intervention
	Operator's name
	Technician's signature
	Firma committente

9 Phasing out and disposal

We kindly ask you to also safeguard the envirnoment, because we at URBACO considere it to be one of the fundamental elements of development of its market and operational strategies. You can do this by simply following simple disposing instructions :

DISPOSING OF THE PACKAGING

The components of the packaging (i.e. cardboard, plastic, etc.) are solid urban waste and can be disposed of without problems, just throw them out in the proper, correspoding recycling bins.

The components of the packaging (i.e. cardboard, plastic, etc.) are solid urban waste and can be disposed of without problems, just throw them out in the proper, correspoding recycling bins.

DO NOT DISPOSE OF IN THE ENVIRONMENT !

PRODUCT DISPOSAL

Our products are made of different types of materials. Most of these (i.e. aluminium, plastic, iron, electrical cables) are to be disposed of as solid urban waste. These can be recycled through separate waste collection and disposal at authorised facilities.

Other components (i.e. electronic cards, remote control batteries, etc.) may contain hazardous materials. Thus, they must be treated and hand over to special firms authorised to properly dispose of them.

Before acting, always check the specific, current legislation in your location.

DO NOT DISPOSE OF IN THE ENVIRONMENT !

10 Declaration of conformity

CE

MANUFACTURER'S DECLARATION

Pursuant to annex II A of the Machinery Directive 98/37/EC

URBACO S.A.
Z.A. du Couquiou
84320 ENTRAIGUES
FRANCE

Declares under its own responsibility that the equipments listed below:

LUXOR AUTOMATIC RETRACTABLE BOLLARDS

BPLUXE60/G/R, BPLUXE80/G/R, PLUXF60/G/R, BPLUXF80/G/R, BPLUXG60/G/R, BPLUXG80/G/R,

LUXOR TECHNICAL CENTERS

CC6U200PR, CC6U200PRS,

LUXOR COMPLEMENTARY ACCESSORIES

COPURA-LUX, COKCHGT-LUX, BOEVP-LUX, BOEVB-LUX, COVF-LUX, KITBEA-LUX,

comply with the National Law related to the following European Directives and to the applicable parts of the following Standards.

--- Directives ---

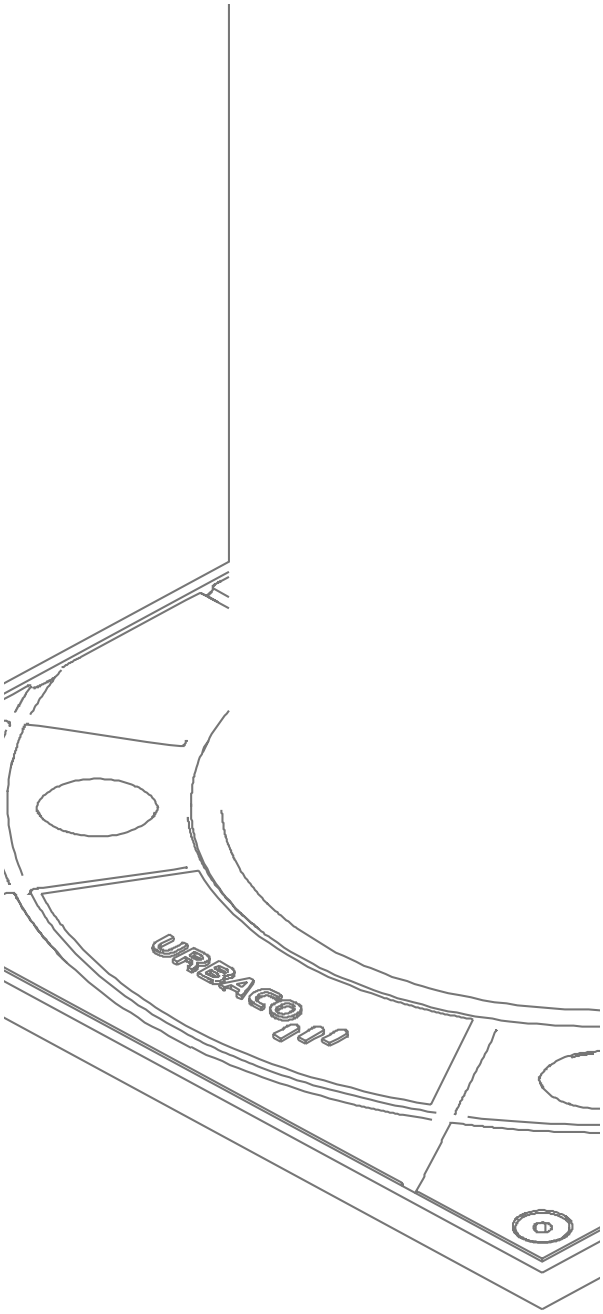
98/37/CE - 98/79/CE	Machinery Directive
2004/108/CE	Electromagnetic Compatibility Directive
2006/95/CE	Low Voltage Directive
87/404/CEE	Simple Pressure Vessels Directive
97/37/CE	Pressure Equipment Directive

--- Standards ---

EN 60204-1	EN 1050	EN 60529	EN 60068-2
EN 61000-6-2	EN 61000-6-3	NF P 98-310	EN 3744
EN 11201	EN 1012-1		

IMPORTANT WARNING!
This statement is legally binding only if the specifications in the supplied instruction manual have been properly followed.
Do not use the equipment specifi ed here above, before completing the full installationIn full compliance with the Machinery Directive 98/37/EC.

the Chairman
Andrea Menuzzo



URBACO

URBACO SA
ZA du Couquiou
84320 ENTRAIGUES -FRANCE
www.urbaco.com

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