

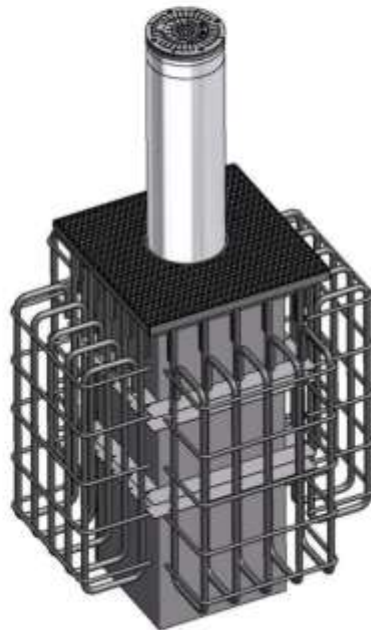
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RETRACTABLE BOLLARD  
275/K4 900A  
275/K4 900A E.F.O.

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**TECHNICAL INSTRUCTIONS**

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## WARNINGS FOR THE INSTALLER – GENERAL SAFETY OBLIGATIONS

1	ATTENTION! It is very important for the safety of people to follow all instructions strictly. A wrong installation or use of the product could cause serious damage to people.	17	Each automatic installation should have at least one lighting device (i.e: flashing lights integrated in the crosshead of the bollard) and a signal placard, along with the device quoted at point "16"
2	<u>Read carefully this manual</u> before starting installation and save it for future reference.	18	In each automatic installation the installer must consider and install appropriate safety devices.
3	Packaging materials (i.e. plastic, polystyrene, etc.) must be out of children's reach, because potentially dangerous.	19	For maintenance works use only original parts supplied by Pilomat S.r.l.
4	This product has been designed and manufactured exclusively on the purpose indicated in this manual. Any different use not here indicated could damage the integrity of the product and/or be potentially dangerous.	20	Pilomat S.r.l. is not responsible for safety and good functioning of the product, in case of use of components not manufactured or distributed by Pilomat S.r.l.
5	Pilomat S.r.l. is not responsible for any damage caused by improper or different use from the indicated one.	21	Do not apply any modification to the parts composing the automated product PILOMAT.
6	Do not install the device in an explosive area. Using information related to gases could be not safe, the manual	22	Inflammable The installer must provide the Customer with all release of the automatic bollard in case of emergency and give the User a warning manual attached to the product.
7	Installation must be according to the local Laws.	23	Do not allow children or others to stop close to the bollard during operation.
8	In order to have an adequate safety level in the extra-CEE Keep countries, in addition to the national laws, the above mentioned	24	remote controls or other impulse-giving devices out of children's reach, in order to avoid involuntary activation. laws must be followed.
9	Pilomat S.r.l. is not responsible if someone does not observes the correct method of installation of the PILOMAT products and related devices, included deformations coming during the use.	25	Thoroughfare over the Pilomat bollard allowed only at complete lowering of the bollard.
10	Before any actions on the automatic installations take power	26	off. Semiautomatic bollards are not adviceable for multiple installation (two or more) on main streets where the frequent passage of vehicles over the lowered bollards can break the lock block and make the bollard lifting without control.
11	An Omni polar switch should be foreseen on the alimentation's net of automatic installations. Its connections should have an opening range of 3 mm. A magnetothermal differential with 6A Omni polar switch is adviceable	27	The User must avoid any repairing actions or direct operations on the bollard, and must address to qualified and authorized personnel only.
12	Assure that a differential switch with 0,03° is present at the beginning of the automatic installation.	28	Do not waste exhausted batteries in the garbage, but dispose them in the apposite containers to allow recycling. Disposal costs have already been paid by the manufacturer
13	The main electrical alimentation of the control unit of automatic installations must be connected directly to at the beginning of the apposite principal switch set inside the control unit; use anti-flame cables approved by at least one of the European Institutes. The dimension of the first alimentation line must be minimum 3x2,5mm, but evaluated by the installer according to the number of PILOMAT (400W each PILOMAT) and the distance from the output point in order to guarantee a correct alimentation (230V +/- 10% for moving PILOMAT).	29	The product is packaged on Euro pallet; use pallets' movers or shunters for movement; handle with care.
14	Test that the earthing is workmanlike and connect the metallic parts.	30	The product has been manufactured with IP 56 protection's level, and could therefore be stored everywhere; storage in internal or covered places is anyway preferable.
15	The automatic installations include a standard safety device: an inversion pressure switch in case of at least 40 kg of load. It is anyway necessary to test the activation level every six months, according to what laws establish.	31	The product does not require availability of spare parts; Pilomat's warehouse can send by express any needed spare parts.
16	Safety devices (Law EN 12978) allow protection of potentially dangerous areas where activities such as squashing, conveyance, shearing are possible to occur.	32	In case of maintenance and/or reparation, Pay attention not to give improper raising signals; to avoid any problems, disconnect the bollard's moving by the switch set inside the control management station.
		33	Everything not mentioned in this manual is not allowed.



## EC DECLARATION

The manufactured: **PILOMAT S.r.l. - Via Zanica 17/P, 24050 Grassobbio (BG – Italy)**

Brand name: **PILOMAT**

Product Code: **PD101092**

Model/type Description: **AUTOMATIC PILOMAT 275K4-900AFEV**

Descriptive Information **AUTOMATIC RISING BOLLARD**

**DECLARES** that the product complies with the requirements of the following European Directives:

- **Low Voltage Directive (2006/95/EC)**
- **Machinery Directive (2006/42/EC)**
- **Electromagnetic Compatibility Directive (2004/108/EC)**

**The following harmonized standards have been applied:**

- **EN 61000-6-1:2007** Electromagnetic compatibility (EMC) Part 6-1: Generic standards  
- Immunity for residential, commercial and light-industrial environments
- **EN 61000-6-3:2007 + A1:2011** Electromagnetic compatibility (EMC) Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments
- **EN 60204-1:2006 + EN 60204-1/A1:2010 + EN 60204-1/EC:2010** Safety of machinery - Electrical equipment of machines Part 1: General requirements.

Grassobbio (BG – ITALY) 13.01.2016

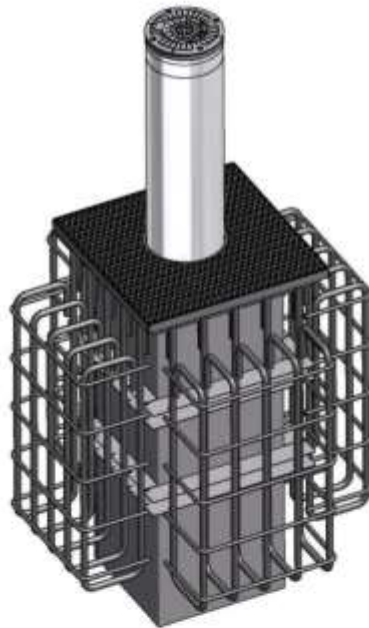
Technical Manager

**Sergio P.I. Toffetti**

**275/K4 900A PAS68 and IWA**  
**AUTOMATIC BOLLARD WITH BUILT IN HYDRAULIC PUMP**

## MAIN TECHNICAL CHARACTERISTICS

MOVING CYLINDER	FE 510 STEEL
MOVING CYLINDER DIAMETER	275 mm
MOVING CYLINDER HEIGHT	900 mm
MOVING CYLINDER FE 510 STEEL THICKNESS	10 mm
MOVING CYLINDER FE 510 STEEL FINISH	POLYESTER POWDER PAINT- STANDARD GREY ANTHRACITE
OTHER MOVING CYLINDER FINISH	RIBS ON CYLINDERS SURFACE - 316 AISI STAINLESS STEEL BRUSHED COVERING - 1,5 mm
REFLECTING ADHESIVE STRIP	YES - HEIGHT 55mm
RISING SPEED	10 cm/sec. (60cm/sec. With E.F.O. circuit) - Optional 20 cm/sec
LOWERING SPEED	20 cm/sec.
MANUAL EMERGENCY LOWERING	YES
CONNECTION PIPE TO CONTROL UNIT	STANDARD 10 mt (MAX:80 mt - IF WITH HEATING MAX 50mt)
HYDRAULIC PUMP	BUILT-IN INTO THE PILOMAT
GRADE OF PROTECTION	IP 67
TYPE OF USE	INTENSIVE LIFE AVERAGE 3.000.000 MOVEMENTS - 2.000 MOVEMENTS/DAY
IMPACT RESISTANCE (WITHOUT DEFORMATION)	250.000 J.
BREAKOUT RESISTANCE	750.000 J.
OPERATING TEMPERATURE	-40°C + 70°C (FOR LOW TEMPERATURES SEE THE HEATING - COD: AA100041)



# **AUTOMATIC PILOMAT PASS68 275/K4 900A**

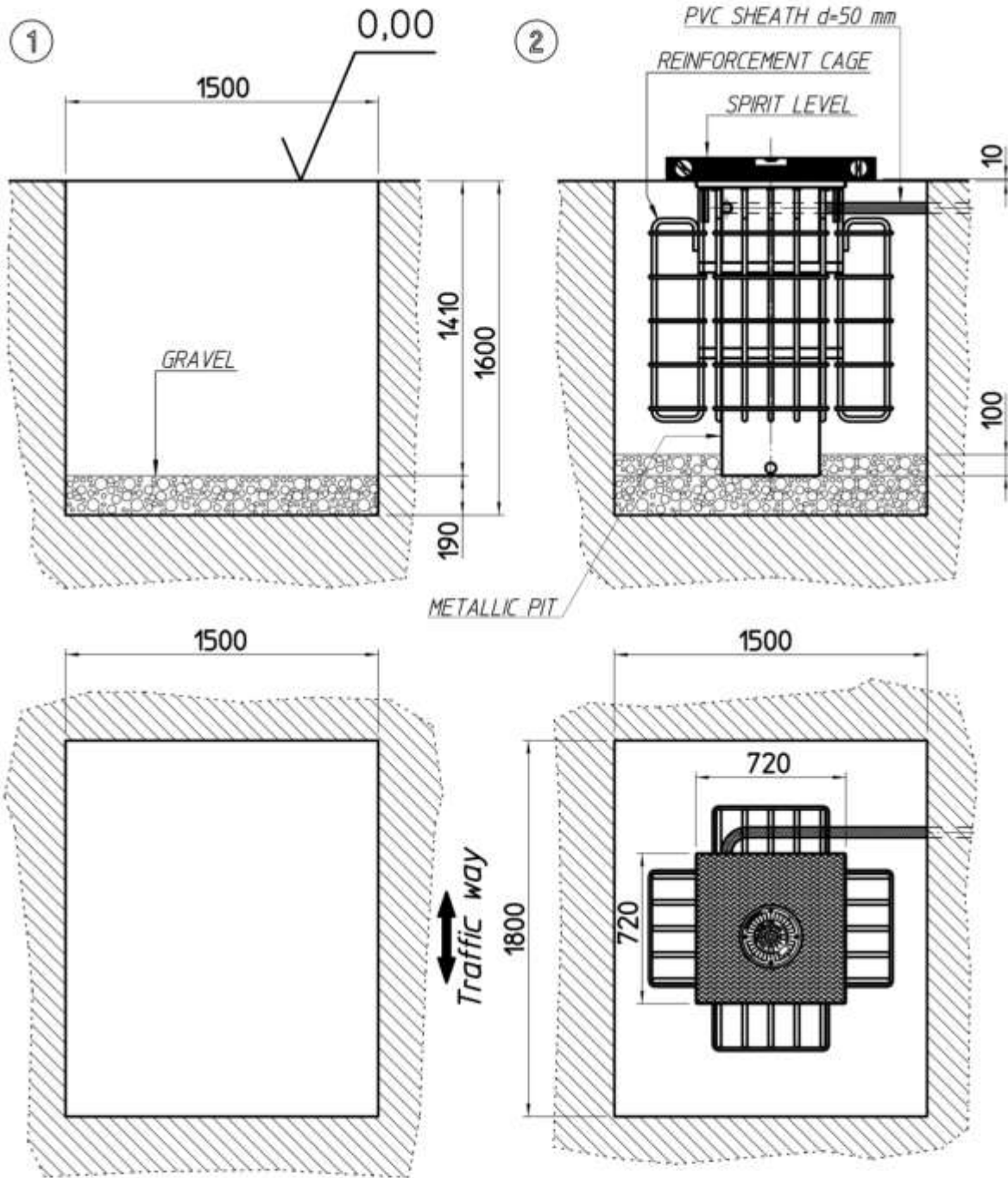
## **INSTALLATION SEQUENCE**

- Ensure that the laying point of the bollard does not fall within an impluvium area; in cases when, no matter why, this circumstance occurs, you need to partially shelter the bollard by means of a draining channel, equipped with covering grid.
- Dig a hole down to 1.60m in depth approx. A sector side shall be 1.80m x 1.50m approx.
- Ensure that the ground features a good water absorption (try by introducing about 40 litres of water and ensure that the draining takes place in less than 30 minutes); otherwise, drain rain water through a pipe that is at least 60mm in diameter connected to the sewer or, as an alternative, connected to a pit (equipped with an electric pump) which has to be deeper than the hole that collects and drains rain water.
- Introduce gravel (grain 8 to 20mm in diameter approx.) until a thickness of 190mm approx. is reached, taking care to compress it well to avoid eventual "settling shrinkages".
- Assemble the metallic pit with counterframe, 16 rebars 14 mm in diameter type FeB44K with butt-welded threaded pieces to high resistance type 8.8 M14 and in addition, add 5 brackets 14mm in diameter (see enclosed drawing).
- Install the pit in the hole assuring to plumb it, reminding that the superior side of the counterframe must be 10mm higher than the walking level (in order to limit water rain enter in to the pit). Check that the counter-frame traffic way references is in the correct direction.
- Once the pit is installed and before concrete casting, set a flexible tube 50mm in external diameter, linking the electrical input of the pit to the control unit.
- Cast concrete  $R_{ck} = 30,00 \text{ N/mm}^2$  all around the pit up to approx. 10cm from walking level (proper measure depends from the type of road surface) and vibrate the casting with specific instrument.
- Set all the other tubes linking the control unit to the different part of the system ( ex. traffic lights, inductive loop etc...), arrange for electrical connection, earthing and other commands if needed.
- Install the bollard in the pit with the proper locking bolts, having previously set the connection line in the above mentioned tube.

Note 1: all tubes must be set in full compliance with the regulations in force .

Note 2: in case of installation with more bollards it is suggest to do a single big hole to place the pits; after the placing of the pits in line, link the 5 brackets of each pit on the two sides with 5+5 rebars – ref. drawing P275K4-SC33.

INSTALLATION PLAN

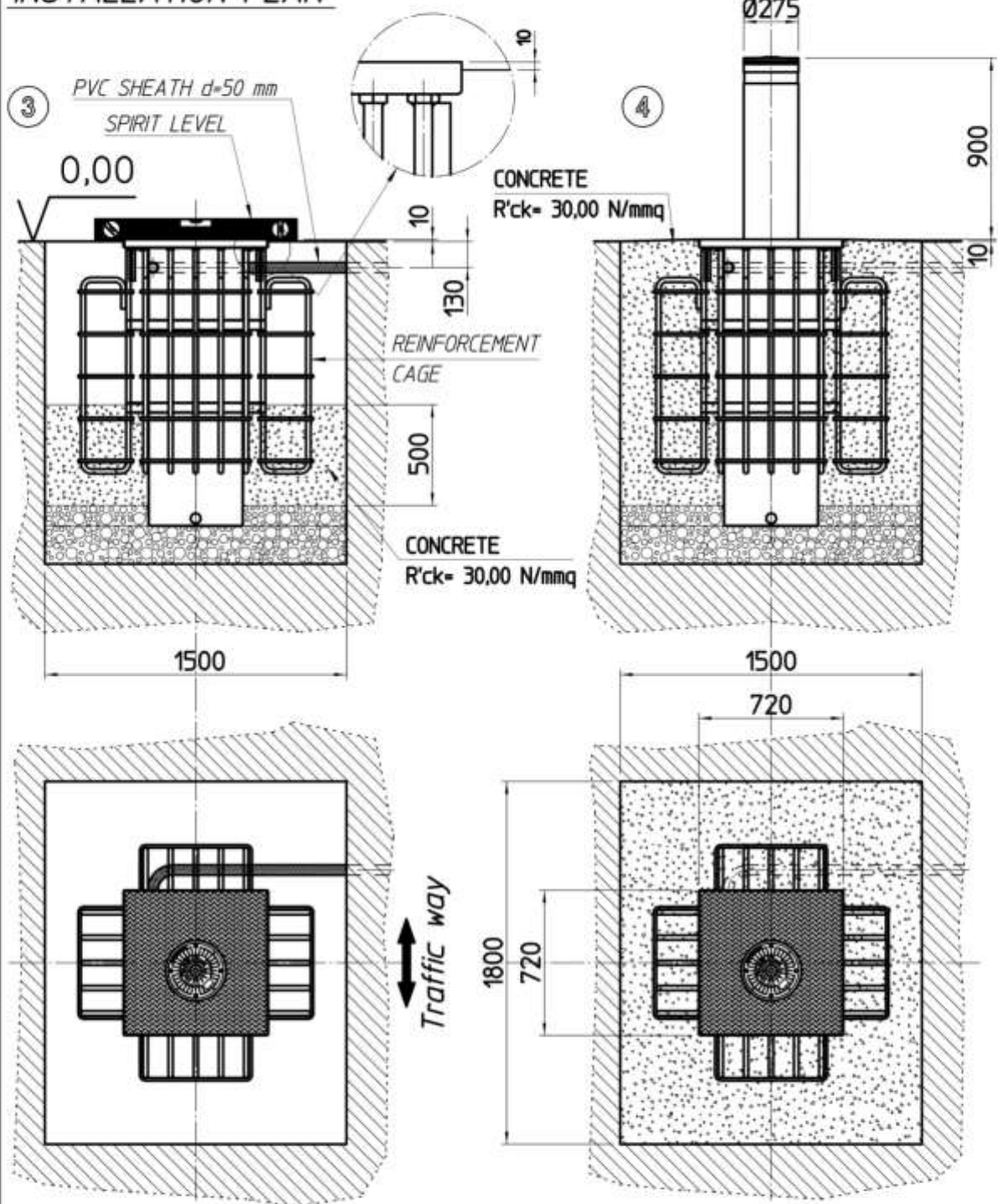


DIMENSIONS IN mm

*AUTOMATIC PILOMAT 275/K4 900A- 900A E.F.O.*

DIS. P275-K4\_SC32

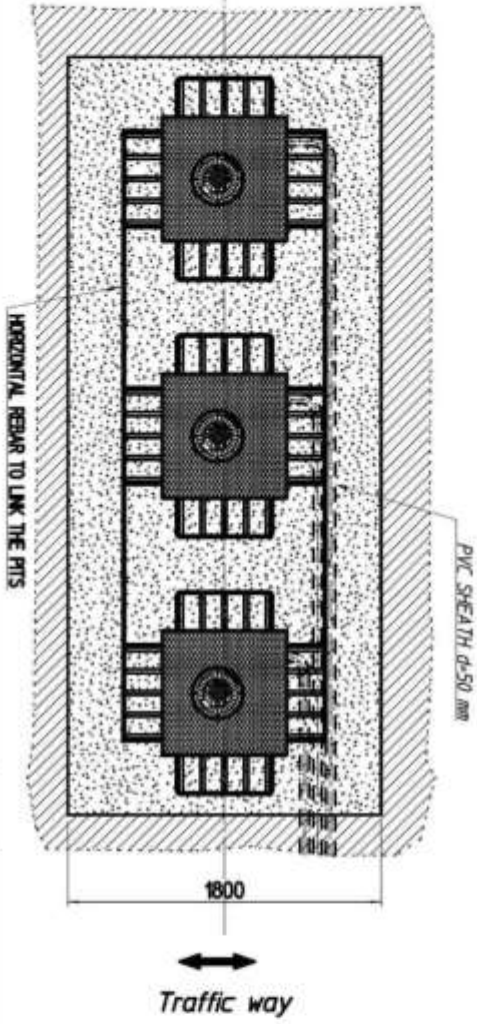
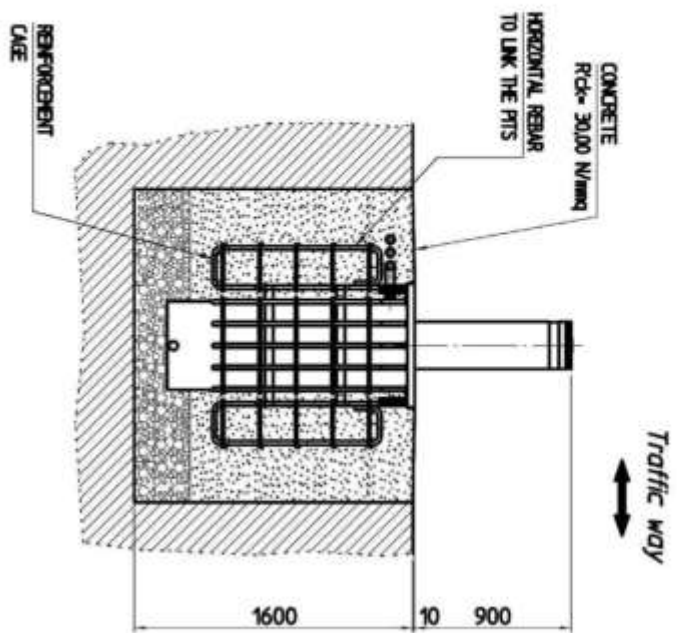
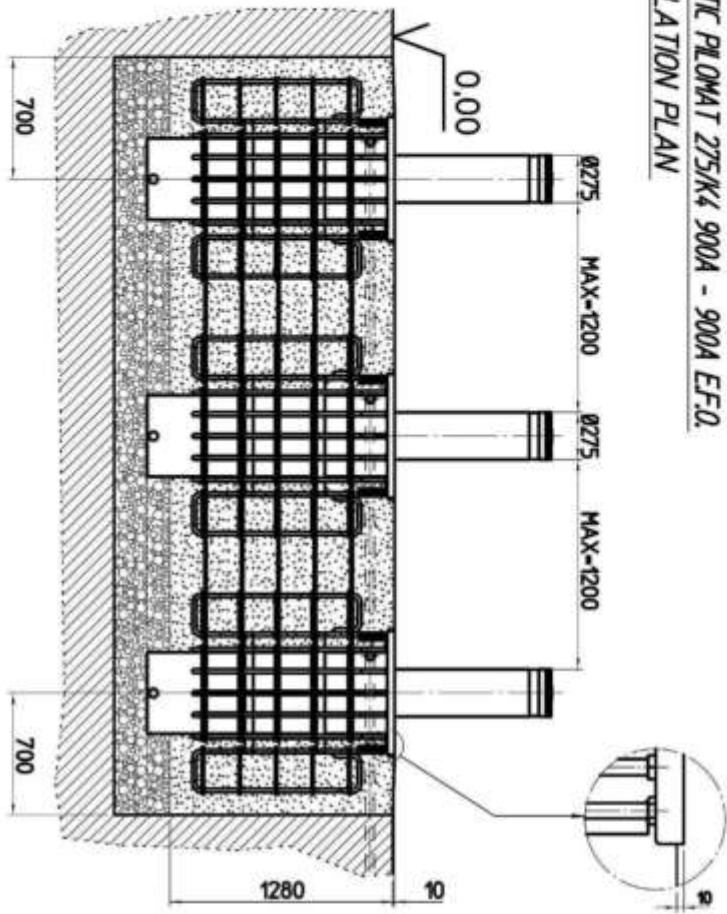
*INSTALLATION PLAN*



DIMENSIONS IN mm

**AUTOMATIC PLOMAT 275/K4 900A - 900A E.F.O.**  
**INSTALLATION PLAN**

DS. PZ75, K4, SC33



DIMENSIONS IN mm