



Installation -Full Auto Elector-Pneumatic Hydraulic Bollard

1.Necessary tools



水泥切割机



挖掘机



卷尺



PVC三通管



90度PVC管



PVC直通管



水平线



PVC粘合剂



电缆线



水平尺



锯刀



防水胶



砖块



水泥

Tools : cement cutting knife、 digger 、 band tape、 nylon cord、 small cross screwdriver、 small-field screwdriver、 waterproof blanket cloth、 Electrical adhesive cloth、 ϕ 32mmPVC tube (straight in、 Triple Several) ; 4 sq 2 core cable , 2.5 sq 3 core cable ; 0.75 4 core cable ; 3 core connected waterproof connector ; 4 core connected waterproof connector



Install And Debug Requirement

- 1、 Project site request: According to the provide size Length N(Base on the bollard qty) ×width 600mm×depth 1300mm (including 200mm high-permeability layer) to dig the basic hole , in the bottom to put the sand and stone for permeability layer in thickness of 200mm 。 , The permeability layer must be in level and strong to avoid the bollard to go down in the bottom
- 2、 To do Water drain or not will base on the different area 。
- 3、 after put the bollard inside the hole and then to make it to be level ,the front of the bollard should be a little higher than the ground in between 3-5mm
- 4.Embedded conduit : Put the product on the leveled foundation pit and bury the pipe according to the position of the outlet hole reserved on the surface of the outer bucket. The diameter of the pipe is determined according to the number of roots of the lifting column. in general, the main power cord of each control box is 4 square two-core wire, and the cable specification required for each lifting column is 2.5 square three-core cable and 0.75 square four-core cable. The specific use should also be determined before construction according to the needs of the use site and the different distribution of electricity.
- 5、 pouring : First, the lifting column interval 1300mm (the installation interval is determined according to the site situation) put the equipment into the pit, fill the proper amount of sand and stone to fix the equipment, and then pour the equipment slowly and evenly with C40 concrete until it is horizontal with the upper surface of the equipment.。

(Note : When pouring, it is necessary to fix the column and prevent it from moving and tilting when pouring). After receiving electricity (pay attention to the cable connection of the lifting column, please use waterproof connector or waterproof electrician adhesive cloth to wrap it over and over again), test to ensure that each lifting column can be operated normally, and carefully pour around the lifting column to avoid horizontal dislocation of the lifting column.。



Steps For Installation

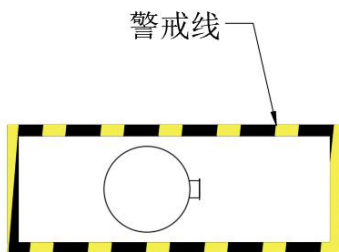
- 1、 Detect whether underground is suitable for excavation, whether there are underground cables, water pipes, optical fiber lines and other obstacles ;
- 2、 Dig foundation pit, underline, determine the position of foundation pit ;
- 3、 After digging the foundation trough, the seepage layer is laid in turn at the bottom of the foundation, 200mm gravel layer, 100mm broken sand layer, permeable layer paving, tamping, preventing equipment from sinking; if the conditions are available, the gravel below 10mm can be selected without using sand. Choose whether to do drainage system according to the different situation of region. Connect the bottom drain pipe of the lifting column drain tank to the outside of the 90 degree pvc pipe facing the ground to lead the water to the underground natural seepage.
- 4、 After the position is fixed, the cylinder is fixed with sand and stone, the line pipe is buried in advance, the water pipe is connected to the bottom of the lifting column with 90 degree water pipe and the drain pipe is connected to the bottom of the lifting column (natural seepage mode), and the water pipe is connected with each lifting column to lead the water pipe to the reservoir (which needs to be built separately) or sewer.
- 5、 Put the equipment in the pit, energize and test whether the operation of the lifting column is normal, the equipment is properly back filled with a proper amount of sand, the stone will fix the equipment well, ensure the horizontal symmetry, and then use the c40 concrete to be slowly and uniformly placed until the surface level with the equipment. (Note: After pouring the cement for multiple times to be fixed after pouring, measure whether the lifting column is horizontal to prevent it from being displaced and then all evenly cast to the surface level after it is inclined.)

Note: before the equipment turns on the circuit, all the power cord connectors must be connected by anti-water tape or waterproof junction, do a good job of waterproof treatment, in the up, down operation, observe the equipment rise, drop, adjust the equipment lift direction (if the lifting column has the opposite direction, adjust the replacement control box lift column motor cable zero line (yellow) fire line (red)



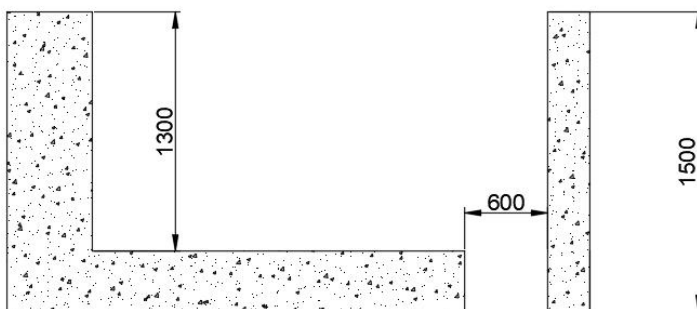
Installation Photo Example :

一 : Layout of cordon and construction marking



Arrange warning lines at the construction site first to remind pedestrians of construction safety here. The construction area shall be marked for later excavation and trunking.

二 : Excavation of the foundation pit and the line of the trunking



Foundation pit width : 800mm

Foundation pit depth : 1300mm



depth of drainage well : 1500mm

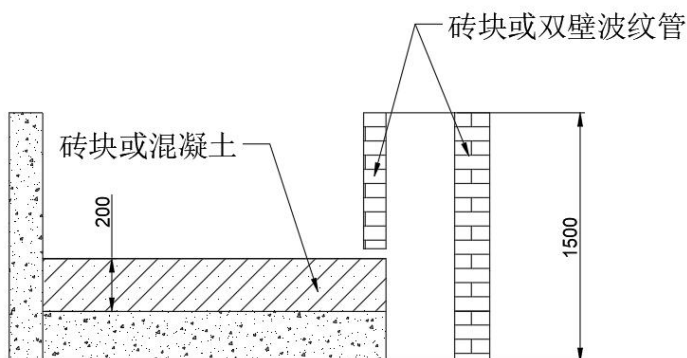
Width and length : 600mm

The length of the foundation pit is determined according to the actual crossing and the number of the columns. The distance between the columns is between 0.8m and 1.5m, as shown in the schematic diagram.

Location of drainage wells excavated according to site conditions

The road surface shall be excavated in order by the cutting machine. If the excavator is to be excavated, be sure to be careful of the underground pipeline, water pipe, etc. The bottom of the water seepage layer is paved with the coarse sand 100mm, the cobble 100mm and the plain ash 100mm in sequence. The spacing of 300 mm requires the insertion of a 32 mm pvc water-permeable guide tube prior to the condensation of the plain ash. Note that at least two draft tubes are required at the bottom of each lifting column.

三 : Laying bottom datum

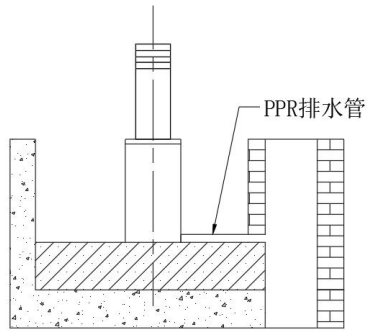


The bottom layer of the foundation pit is laid with cement or brick at the bottom of the foundation pit, with a thickness of 20 mm. It is suggested that concrete should be used for pouring, and the next step should be carried out after the cement is dry through

Drainage wells shall be provided with double wall bellows of at least 50 diameter or laid(two layers of bricks).

Note: drainage wells need to keep drain inlet, drain pipe use 50 ppr pipe. The drain is sealed carefully.

四 : Position the lifting column and connect the drain

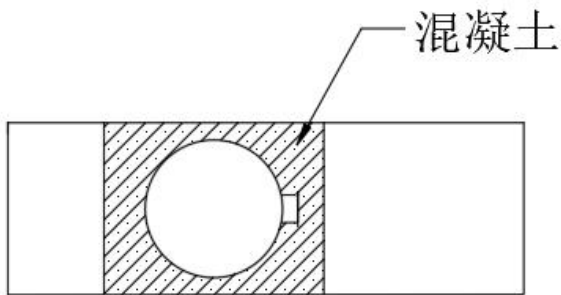
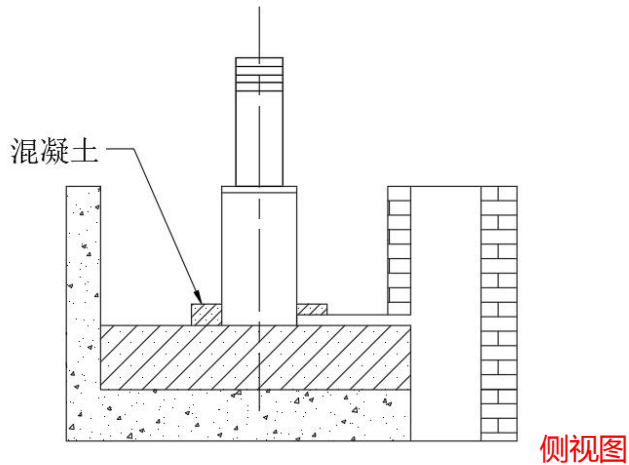


The lifting column shall be placed into the foundation pit one by one according to the scheme, and the road surface shall be leveled.

Connect ppr (50) drain pipe after leveling and connect to drainage well .

Note: before fixing the lifting column, it is necessary to level the pavement with the lifting column. Flange can be high on the road 5mm to 10mm .

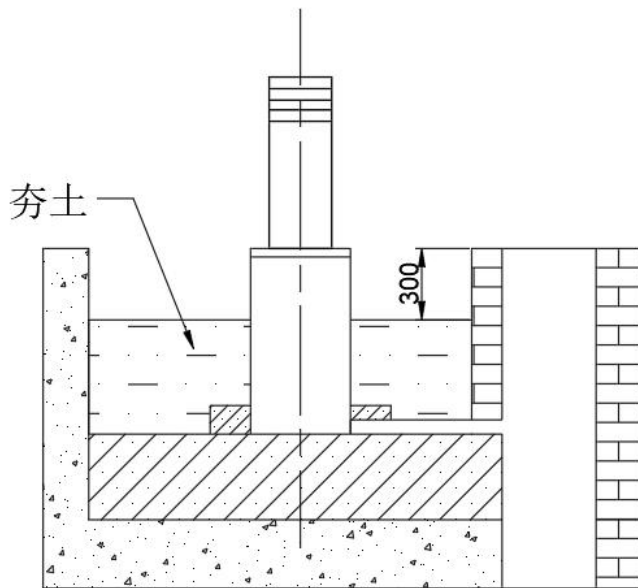
五 : Fixed lifting column



After leveling, use concrete to pour a circle around the lifting column, and the thickness of pouring should be recommended by 200mm



六 : Backfilling of soil and equipment wiring



The tamped soil shall be backfilled to about 300mm above the ground and compacted. .

Motor line using rvv3 * 2.5 gauge wire

The liquid level detector line is connected to the liquid level relay and the control box power supply is connected. .

The light-emitting diode (led) warning light uses a 3 * 1.5 gauge wire. Plug the pvc pipe into the control box after the connection is on-line .

each lifting column line must be plugged into a separate pvc pipe



七 : Wiring

At Site



Lift column wiring schematic diagram, set aside more than 1 meter of line in the column before installation, convenient for future mai

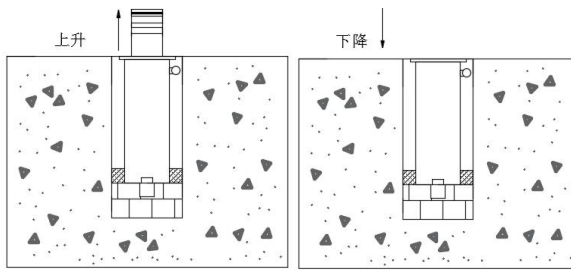
PVC tube connect photo



Note: the installation in the early stage is not standard, and the maintenance in the later stage is more troublesome. Please work in strict accordance with the requirements of this note, be sure to make sure that all wiring is correct, and then turn on the power to debug; in case of problems, be sure to check after power outage 步骤



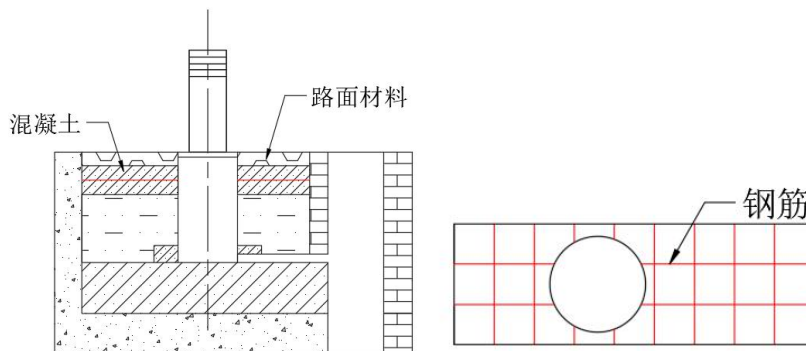
八 : Debug



After the control box link number, carry out power-on test to ensure that the lifting and lowering are normal, and the rising and descending are consistent with the remote controller.

Note: if the lifting and lifting are not consistent with the direction of the remote control, the motor line is connected to each other, and the motor line in the control box can be replaced.

九 : Recovery of pavement



After the equipment debugging is correct, the cement is backfilled, the pavement material is paved, and the road surface is recovered

The reinforcement is distributed in a net shape , Advised Distance 300mmX300mm

Note: red line is steel bar, must be laid steel bar, this can increase impact resistance



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