

Automatic lifting bollard

Product description

Application scenarios:

It is suitable for airports, docks, expressways, customs, ports, transportation hubs, military, government, schools, factories, squares, museums, energy, justice and other places with high anti-terrorism requirements.

Product features:

The floor panel and column cover plate are made of round 304 stainless steel and have anti-skid groove design.

The traveling flange and sliding support rod are made of thickened material, which greatly increases the anti-collision level.

Electro hydraulic integrated fully sealed power unit

Power failure manual solenoid valve emergency release down

The modular assembly design of accessory unit can replace every accessory at any time

The insulation resistance between the power supply of the roadblock equipment, the power lead-in end and the bare metal parts of the enclosure shall not be less than $5\text{m } \Omega$ for the reinforced insulation equipment and $2\text{m } \Omega$ for the basic insulation equipment to ensure the safety of use

After 48h salt spray inspection, the anti-collision column body meets the

requirements of grade 9 in Table 2 of QB / t3832-1999, so that the product can work normally under harsh conditions

Special noise reduction material is used between the traveling flange and the sliding rod to reduce the working noise

The upper and lower limits are made of special materials, which not only has the effect of shock absorption and buffering, but also has a certain hardness, making the column more stable and strong.

The internal structure adopts the way of separating the embedded barrel from the assembly, which greatly increases the stability and compression capacity.

The double centering structure is adopted to reduce the noise caused by the friction of various parts in the process of lifting, which makes the operation more quiet.

Product advantages

Fast

Simple construction

Long life

High stability

Less affected by environmental factors, high corrosion resistance

Modular unit design, easy maintenance

Product parameters

performance parameter

Material of column body: 304 stainless steel

Column diameter: 219mm / 273mm (customizable)

Blocking height: 800mm (customizable)

Column wall thickness: 6mm (customized 8mm, 10mm, 12mm)

Diameter of embedded barrel: 325mm (change according to column diameter)

Height of embedded barrel: 1300mm (change according to blocking height)

Column surface technology: surface drawing process

Static compression capacity: not less than 20 tons (falling to the position)

Column sheath: modified nylon sheath

Disassembly performance: modular unit, detachable

Reflective warning: Diamond reflective film (standard neutral fluorescent yellow green)

Limit mode: mechanical adjustable limit

Anti corrosion: zinc plating, chromium plating and plastic spraying

Dynamic parameters

Power unit: electro hydraulic integrated fully sealed double acting unit
(customizable single acting: half calorific value and half power consumption)

Power supply: AC220 V / AC380 V / DC24 V

Power: 370W

Starting current: 3A

Rising speed: 150 mm / S (customizable 200 mm / s)

Working environment temperature: - 30 °C ~ 60 °C

Protection grade: IP67

Power failure emergency: manual DC12V solenoid valve

Usage frequency: 1 time / min, continuous operation

Warning light: DC12V bright LED warning light (customizable)

A. Precautions

Thank you very much for choosing our lifting column series products! Before using the product, please take a short time to read this manual, so that you can quickly understand the characteristics of the product, better to install and operate, and better play to the performance of the product.

1. Before digging the foundation ditch, please confirm the municipal underground public facilities and pipelines, so as not to affect the normal installation.
2. Understand the position of foundation ditch and the structure of underground soil layer.
3. The construction site shall be closed with cordon or guard fence.
4. The controller needs separate power supply from the main control room, and the input main voltage from the control box is AC220V (rvv3 * 6mm m2)
AC380 input (RVV (3 + 1) * 6mm2).
5. When the concrete is poured after the construction, the panel must be well protected to avoid impurities entering the gap around the column, which will affect the normal lifting of the column. It is strictly forbidden to use the roller to roll on and around the column, and it is strictly forbidden to use the vibration pump.
6. Do not lift the motor frequently for a short time, which will cause the motor to overheat and stop working.

7. Pay attention to vehicles and pedestrians when they need to rise to avoid unnecessary injury and property loss.

8. After pouring, the curing period of concrete is 7 days, and it can be opened to traffic after curing.

9. The air switch not connected to the lifting column always remains disconnected.

10. The control box needs to be placed indoors. If it needs to be placed outdoors, the outdoor waterproof protection device (waterproof electric control room or outdoor waterproof box, etc.) must be built.

B. Preparation of construction site materials and tools before installation of equipment

1. Stone: laying of seepage cushion at the bottom of foundation ditch

2. Large diameter bellows, fine sand and cement: used for drainage well construction

3. Reinforcement: it is used to fix the roadblock and weld it into a well shaped frame

4. Concrete: calculate the quantity according to the length x width x height of the foundation ditch, and arrive at the site on time

5. Threading pipe: 1.2-inch nylon pipe, purchased according to the distance between the number of roadblocks on site and the control box, one for each roadblock

6. Cable: AC220 V (rvv3 * 6 m2) from control box to input main voltage

AC380 input (RVV (3 + 1) * 6mm2)

Note: if the total number of piles is more than 8 or the length is more than 30m, the

main voltage wire diameter shall be thickened

The cable from the control box to the roadblock equipment (rvv7 * 2.5mm²), such as 3 cores of motor (if the control box is more than 50m away from the road stake, 2 cores of rvv3 * 2.5mm² warning light and 2 cores of emergency descent shall be used, and each roadblock shall have a separate cable. One grounding wire from roadblock to control box (BVR 4mm²)

7. Cable wiring tape: insulating tape, high voltage waterproof tape, prepared according to the number of field equipment

8. tools: electric welding machines, road cutting machines, electric pickaxe, trenches, shovel and accessories, civil construction tools, on-site safety construction facilities, etc.

C. Equipment installation construction requirements and standards

1. According to the design scheme, draw the length and width of the foundation ditch on the ground of the installation site, and then cut the road with the road cutting machine.

Note: before trenching, communicate well with the user to ensure that there are no pipes, cables, optical cables and other objects underground in the trenching area, so as to avoid disputes.

2. Foundation ditch construction: the depth and width of foundation ditch for 800mm high column and 1300mm high embedded bucket are 1.8m and 1m respectively. The ditch length is calculated according to the installation quantity and spacing of roadblock equipment, and 1m (0.5m on both sides) is added to the

total length. The four walls of foundation ditch are required to be vertical, and the ground is smooth and standard.

Requirements: make necessary construction scheme before construction to avoid influence and damage to the pavement and other facilities underground and outside the construction area.

3. Laying at the bottom of the foundation ditch: the bottom of the foundation ditch shall be filled with river pebbles or crushed stones with a diameter of 3-5cm as seepage cushion, with a thickness of 40cm. The thickness shall be uniform and flat, which will not affect the placement of the next roadblock equipment.

4. Draw a construction line (center line) between the two ends of the trench length and the center of the ground horizontal line. Along the trench width direction, draw a construction line as the center point according to the distance between the center of each roadblock equipment installation position and the ground horizontal line. The trench length and width form a cross positioning line for equipment installation. Use the cross positioning line as the center point, and build 50 * 50cm with red brick at the bottom of the trench, For the base with a height of 13cm, note: the height from the upper plane of the base to the ground is 1300cm, and both ends of each line are required to be fixed with steel nails to make it tight without displacement.

5. Installation of equipment: position according to the installation center line of each roadblock equipment, place it vertically and adjust it horizontally (with a level ruler). The height of the equipment shall not exceed the center line, and shall be

level with the center line.

6. After the installation of the equipment, the drainage system should be installed.

First of all, a drainage well should be built with red brick at the long end of the ditch, and a self-priming pump should be put in to drain the water to the municipal drainage channel. Please further communicate with the technical personnel of our company for the detailed scheme of the drainage system.

7. Steel bar welding: it is necessary to reconfirm that the equipment is vertical to the road and evenly divided, and then weld the steel bar into a three-layer trellis.

The first layer is above the bottom of the equipment, about 30 cm from the bottom; the second layer is in the center of the equipment; the third layer is below the top of the equipment, about 30 cm from the top.

8. Backfilling: after the welding of reinforcement, the residual soil shall be backfilled for 20-30 cm.

9. Equipment wiring debugging: there are 7 wires in the equipment, and 3 wires for motor power supply, which are ascending, descending and public in order, subject to the cable prompt nameplate; emergency descending is two red or black wires regardless of positive and negative; two warning lights are divided into positive and negative poles, subject to the cable prompt nameplate. After confirming the completion of cable connection and waterproof, record the cable number or color of each cable corresponding to the connecting equipment, introduce it into the control box in turn, and connect it to the corresponding terminal. After the connection, the equipment is debugged, and the standard is that the column body

rises and falls normally, there is no abnormal noise, and the synchronization is good.

Tips:1. If there are problems in the power on test, the equipment should be debugged or replaced in time until it is in the best state.

2. Each lifting pile needs a separate 1.2-inch nylon pipe to the control box to protect the cable (it is not allowed to share one threading pipe with the pile).

10. Pouring link: pouring concrete shall not be less than 50 cm, 15 cm below the road surface, leaving space for original road surface restoration, or pouring concrete directly to the ground as required.

Tips:1. It is strictly forbidden to use mechanical equipment such as vibrating rod to mix the concrete in the foundation pit during backfilling;

2. It is strictly forbidden to backfill stones or bricks with a diameter greater than 5cm into the foundation pit.

How to use lifting piles

Step 1: open the air switch circuit breaker and start the control system.

Step 2: when the piles needs to be raised, press the up arrow button of the remote control (or manual control box) to raise the stake. Warning: when the top of the pile or nearby may contact with objects, it is forbidden to operate the pile to rise.

Step 3: when the piles needs to be lowered, press the down arrow button of the remote control (or manual control box) to lower the pile. Warning: do not operate pile lowering and release vehicle unless vehicle safety is confirmed