Başkent Organize Sanayi Bölgesi
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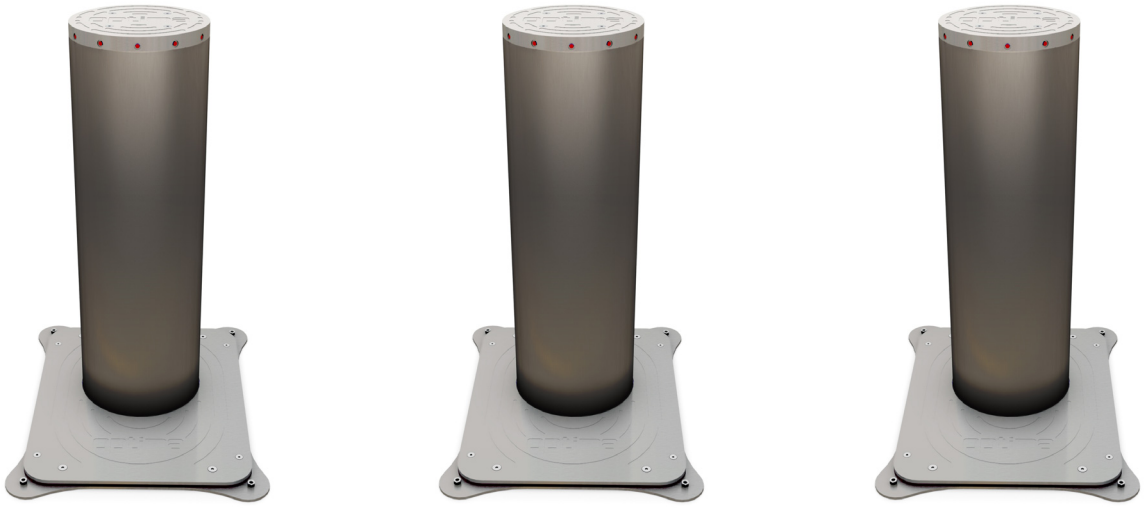
HRB-HS

PATENT 2017/04667



GENERAL DESCRIPTION

Optima HRB-HS hydraulic retractable bollards are designed for high-security vehicle entrances, military, industrial, governmental and commercial buildings or streets which are closed to vehicle traffic between certain hours of the day. Typical raise/lower time is 3-5 seconds but it is possible to design the system to raise/lower in 1.5 seconds in emergency fast mode if hydraulic accumulator added to the system (optional).

STEEL STRUCTURE

The raising section of the standard bollard diameter is 219 mm (options available). The standard raised height is 80 cm. The lower and upper heights are available. The road surface area is covered by aluminum steel flange. In the lowered position the bollard withstands 50 tons of vehicle axle loads. All the machine elements forming the bollards are corrosion resistant. Carbon steel bollard core covered by 3mm thick AISI 316 grade stainless steel sleeve which has a vertical satin finish. In lowered position bollard withstand 50 tons of axle load.

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HYDRAULIC POWER UNIT AND CONTROL ELECTRONICS

All the hydraulic components are tested at 250 bars although normal operating pressure is around 60-110 bars. The manual hand pump is standard in the HRB-HS series, therefore in case of power failure, it is possible to raise and lower the bollards by a manual hand pump. Coolers or heaters can be integrated into the hydraulic power unit in extreme weather conditions (optional). Control electronics utilized in hydraulic retractable bollard is by means of PLC. Two push buttons operator keyboards with emergency stop are standard; one desktop, other being integrated into the hydraulic power unit. AC electric motor is driven by a contactor and protected by a thermic breaker. The low current voltage required by the system is supplied by a switch-mode power supply. All the cables running in the system are color-coded and numbered to ease tracking. LED light which are located at the top of the bollard flash during operation.

ENVIRONMENTAL CONDITIONS AND POWER REQUIREMENT

Between -15°C and +65°C, 95% non-condensing humidity; 380V, 3 phase, 50-60 Hz (or 220V/440V/etc., three phase, 50-60 Hz, optional by transformer)

OPTIONAL ACCESSORIES

- Red/green traffic lights with a steel pole.
- Safety photocell.
- Stand and casing for safety photocell.
- Dual vehicle safety loop detector.
- Protective construction(tubular) around the drive unit.
- Hydraulic accumulator.
- Transformer to convert the power.
- Uninterrupted power supply (UPS).
- DC motor and pump with dry batteries.
- Submersible drainage pump.
- Wrong way alarm.
- High-speed alarm.
- SCADA or any control system: It is possible to change and check the position of bollard with a touch screen control panel, mobile devices (ios-android), computer, etc.

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MODELS

- Diameter : 168/219/273/324/355mm.
- Raised height : From 400mm to 1200mm (Standard height: 800mm).
- Groups : From 1 bollard to 4 bollards per hydraulic power unit(3-5 sec),(1,5 sec Emergency Raise).
- Groups : From 5 bollard to 6 bollards per hydraulic power unit(5-7 sec),(2 sec Emergency Raise).
- Groups : From 7 bollard to 8 bollards per hydraulic power unit(8-12 sec),(3 sec Emergency Raise).

MAIN BODY MEASUREMENTS AND FOUNDATION