



Surface Mount Hydraulic Road Blockers



General Description

Surface Type Road Blockers are designed especially for entrance points which have a threat of vehicle attack or for the ones that have high security requirements. If there is a threat of vehicle attack in addition to the control of vehicle access in high security applications, hydraulic road blockers are the unique solution and the most secure systems. Even though the attack is from high tonnage vehicles with high speeds, it is not possible for the vehicle to keep on moving because of the damage given to front, wheels and the bottom of vehicle. A surface type road blocker is installed directly on the road., therefore it does not need any excavation or civil works. Optima road blockers are designed to K12 standards Finite element model analyses are available upon request. Drive Unit is electro-hydraulic, but in case of power failure road blocker can be lowered or lifted manually with the help of manual hand pump. Or by using hydraulic accumulator, it is a pressure storage reservoir in which a non-compressible hydraulic fluid is held under pressure by an external source. It is used for 3 cycle raise/lower. Typical raise/lower time is 3 seconds. In case of emergency, raise/lower time can be as low as 1.5 seconds. With the help of PLC (programmable logic control), raise/lower function can be achieved by every kind of card readers, biometric readers like fingerprint or hand shape, radio control on/off key switch etc. Besides, safety accessories like photocell, inductive loop detectors, flashing lights or red/green traffic lights can be integrated to the system very easily. Typically weight of a road blocker is 2-2.5 tons (depending on road blocker type).

STEEL CONSTRUCTION

Main mechanical elements forming the construction are heavy duty 10 mm bottom plate, 20 mm top plate and the frame consisting of 100x100 box, 100 mm U and I beams. This sophisticated mechanical design enables the road blocker to withstand minimum 40 tons of axle loads, besides, in case of crash, linkage bars transmit the impact directly to the foundation, therefore help to protect the steel structure. Cushioned cylinders power the road blocker up as they pivot on multi-sealed bearings. Steel construction is either hot dip galvanized (upon request) and 3 layer primary coated in order to prevent rusting. Additionally all the parts are yellow-black painted ("STOP" warning in the front).

HYDRAULIC POWER UNIT AND CONTROL ELECTRONICS

All the hydraulic components are tested at 250 bars although normal operating pressure is around 75-100 bars. Manual hand pump is standard in HRR series, therefore in case of power failure it is possible to raise and lower the blocker by manual hand pump. Coolers or heaters are can be integrated to the hydraulic power unit. Control electronics utilized in hydraulic road blocker is PLC controlled. Two keyboards with emergency stop are standard; one desktop, other being integrated in the hydraulic power unit. Motor is driven by a contactor and protected by a thermic breaker.

Protection system when overload, failure circuit, increase the voltage or over current. The low current voltage required by the system is supplied by a switch mode power supply. There is a fuse for every component in the system. All the cables running in the system are colour coded and numbered to ease tracking.

ENVIRONMENTAL CONDITIONS AND POWER REQUIREMENT

Between -20°C and +75°C, % 95 non-condensing humidity, 380-415 VAC, 50-60 Hz or 220 VAC, 50-60 Hz, optional

OPTIONAL ACCESSORIES

1. Flashing or red/green lights
2. Stop Lamp on the Blocker with Arabic/English writing
3. Radio control receiver, transmitter and antenna
4. Safety photocell, stand and casing
5. Inductive loop detector
6. Drainage Pump
7. Card Reader System
8. Hydraulic accumulator
9. Uninterrupted Power Supply (UPS)
10. Transformer for convert the power
11. It possible check position of Road Blocker by using SCADA system
12. It possible to operate the system by using solar panel with DC motor
13. DC motor and pump
14. Different colors

MODELS

RAISE HEIGHT : From 450mm to 1100mm

NET OPENING : From 2000mm to 6000mm

