

Tender Specifications

Surface Mount Speedbump K4

Provide road blockers to stop unauthorized vehicles trying to enter to the site by force with the result that the undercarriages, the axis's and the wheel suspension are destroyed and the vehicle is no longer maneuverable. The blocking width should be not less than 1964 mm and the blocking height is not less than 500 mm (620 mm above road way top edge). Road Blocker should be certified according to ASTM F2656/F2656M-15, M30, P1 (-0.67m) and IWA 14-1, Blocker V/7200[N2B]/48/90:0.25 in European independent laboratory. Country of origin should be USA or European countries.

Normal Operation

Road Blockers shall provide excellent security and positive control of normal traffic by providing an almost insurmountable obstacle to non-armored or non-tracked vehicles. The Road Blocker system shall be designed to stop a vehicle attacking from the priority direction, weighing: 7200 KG at 48 Km/h (kinetic energy 664 kJ). Upon impact, forces shall be first absorbed by the Road Blocker assembly and then transmitted to the foundation of the unit.

Installation

Road Blocker, should be surface mounted, and attached to concrete base with anchors only. Concrete base depth shouldn't exceed 200 mm. Installation of blocker using anchors should be done in such way, that whole blocker can be fully removed by unscrewing anchors only; relocated and re-installed without changing of any parts.

Entry/exit and side ramps shall be made of combination of steel and rubber material, and attached to road with anchors, same as blocking unit. Concrete ramps are not allowed. Ramps can be re-used same as blocking unit.

Entry and exit ramps with 500 mm or 1000 mm length, depending on type of vehicle and required slope.

Normal Mode of Operation

Road Blocker shall be capable of being raised or lowered in 3.5 seconds when operated at a repetition rate. Road Blocker shall be instantly reversible at any point in its cycle from the control stations.

Emergency Fast Operation

Road Blocker shall rise to the guard position from fully down in 1.5 seconds maximum when the emergency fast operate button is pushed provided the system has not previously been exhausted by power off or manual operation or high speed cycle rates. Road Blocker shall remain in the up and locked position (normal up/down buttons inoperable) until the EFO condition is reset.

Road Blocker Construction

Road Blocker shall be a above grade assembly containing a heavy steel weldment capable of being rotated to an above grade position. The guard position shall present a formidable obstacle to approaching vehicles. The removable portion of the roadway plate that provides access to the Road Blocker internals shall be fastened with bolts which have their heads recessed below the roadway level.

Road Blocker Height

Height of the Road Blocker shall be 620 mm as measured from the top of the foundation frame to the top of the barrier inclusive of the top road plate.

Road Blocker Length

Road Blocker length should be 1230 mm (3290 mm with front and back ramps)

Road Blocker Width

Road Blocker width should be from 2056 mm to 4056 (from 3056 to 5056 mm with side ramps)

Finishing

Road Blocker front and roadway plates shall have yellow/black stripes RAL 9005/1007.

Road blocker should have protective shutters along the entire length and height of the blocking element, to avoid manual cutting of oil hoses and electric communications during unauthorized access and prevent small animals and rodents from entering inside the structure

Hydraulic Power Unit

Unit shall consist of an electrically driven hydraulic pump which shall pressurize a high pressure manifold connected to a hydraulic accumulator. Electrically actuated valves shall be installed on the manifold to allow oil to be driven to the up and down side of a double acting hydraulic cylinder to raise and lower the Road Blocker. The hydraulic circuit shall include all necessary control logic devices, interconnect lines and valves to override and lock out the normal speed control valves for emergency fast operation of the Road Blocker.

The hydraulic power unit and accessories shall be mounted and wired on an integral steel skid. The HPU shall be mounted in weather resistant enclosure and can be equipped by EFO (Emergency Fast Operating System), manual pump, DC motor, oil level indicator, pressure manometer etc.

The length of hydraulic hoses should be max. 15 meters

Power Off Operation

Provide Road Blocker with an Uninterruptable Power Supply system to allow maximum cycle operations in the event of power failure in duration of 2 hours. The bi-directional control valves shall also be manually operable in this case.

Manual Operation

- A hand pump shall be furnished to allow the road blockers to be raised and lowered manually in the event of a prolonged power interruption.
- The pump shall be located in an easily accessible location.

Electrical Control Equipment

- Locate control panels at corresponding guard posts. The panels shall have:

1. Panel "on" light with "on/off" override key.

2. Buttons to raise, lower and stop the Road Blocker.
3. Blocker "up", "stop" and "down" indicator lights.
4. The emergency fast operates push button with light and override key for reset and unlocking.
 - Control circuit shall be provided to interface between all Road Blocker control stations and the hydraulic power unit. This circuit shall contain all relays, timers and other devices necessary for the Road Blocker operation.
 - PCB in control box, installed in drive cabinet, control voltage 24 V
 - Provide outputs for remote indication of the position of Road Blocker.
 - Possibility of integration with any third-party electronic system including, but not limited to: LNPR, induction loops, IR sensors.

Safety Interlocking System

Provide induction loops in conjunction with specified road blockers as follows:

- Loop dimensions:
 - a. Width according to the actual width of the road blocker with additional 0.5 m at both sides
 - b. Length 4.0 meter
- Provide interlocking function as an integral part of the system to prevent the raising of the road blocker in case of a vehicle being above the loop and the raise-button is pushed simultaneously.

Wheel Load

Axel load should be not less than 15 tons per axle

Origin

Only European or USA products allowed. Origin to be confirmed by Certificate of Origin issued by Chamber of Commerce.