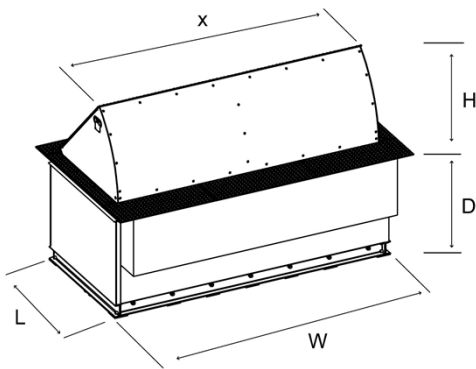


HRB ROAD BLOCKER TECHNICAL SPECIFICATIONS



| HRB | | Number of Pistons | H = 60 cm | H = 90 cm |
|--------|------------------------|-------------------|-------------------|--------------------|
| X | L x W x D (mm) | | L x W x D (mm) | |
| 1,0 mt | BLOCKER CABINET | Single | 1275 x 1170 x 975 | 1680 x 1170 x 1270 |
| 1,5 mt | | Single | 1275 x 1670 x 975 | 1680 x 1670 x 1270 |
| 2,0 mt | | Single | 1275 x 2170x 975 | 1680 x 2170x 1270 |
| 2,5 mt | | Single | 1275 x 2670 x 975 | 1680 x 2670 x 1270 |
| 3,0 mt | | Single | 1275 x 3170 x 975 | 1680 x 3170 x 1270 |
| 3,5 mt | | Optional | 1275 x 3670 x 975 | 1680 x 3670 x 1270 |
| 4,0 mt | | Optional | 1275 x 4170 x 975 | 1680 x 4170 x 1270 |
| 4,5 mt | | Double | 1275 x 4670 x 975 | 1680 x 4670 x 1270 |
| 5,0 mt | | Double | 1275 x 5170 x 975 | 1680 x 5170 x 1270 |
| 5,5 mt | | Double | 1275 x 5670 x 975 | 1680 x 5670 x 1270 |
| 6,0 mt | | Double | 1275 x 6170 x 975 | 1680 x 6170 x 1270 |
| 6,5 mt | | Double | 1275 x 6670 x 975 | 1680 x 6670 x 1270 |

*Dimensions are approximate and subject to change according to cabinet top lid dimension variation.

- Power** : Standard 380V 3-Phase 50/60 Hz, 3,3 - 5,5 KVA motor (varies depending on blocker size).
Opt. 220V, 110V 1-Phase 50/60 Hz; or 24V DC (for some models/sizes only).
- Control Pack** : 24V DC powered and PLC control unit is placed in power unit cabinet.
Solenoids 24V DC (Ops.12V DC / 220V AC)
- Speed** : Standard Operation ~2,5 - 6 sec. (ascend/descend) depending on unit dimensions. Emergency raise up (upwards) by optional hydraulic accumulator ~1,5 sec. and may vary depending on unit dimensions.
- IP Rating** : IP 55 - Hydraulic Power Unit,
IP 58 - Blocker Cabinet (underground unit),
IP 67 - Electronics (optional), protection with housing/box,
IP 68 - Hydraulic Piston
- Crash / Impact Rating** : M50 P1 (K-12) crash tested and certified (HRB 30 R 90) according to ASTM 2656-07,
Designed and produced to withstand H30.
- Axle Load Resistance** : 50T
- Hydraulic Cylinder Unit** : Heavy duty, electrostatic powder coated, dust sealed hydraulic cylinder.
Models between 1- 4 meter widths contain a single piston.
(Double piston versions are optionally available for models 3,5 & 4 meter widths).
Models between 4,5 - 6,5 meter widths contain double pistons.
Cylinder unit features a safety valve against leakage and hose failure.
- Hydraulic Power Unit** :- Strengthened industrial pump,
- 60 lt oil tank capacity with magnetic metal collector and particle filter.
- Built-in oil level and oil temperature sensor with low oil level warning.
- 70-80 Bar pressure; maximum running pressure is 120 Bar.
- 10 mt R2 (double wire braided mesh) reinforced hydraulic hose.
- System** : Down, Up, Emergency and external sensor inputs/outputs (e.g. Loop Detector, Beam Detector, Signalization, Remote Control, etc.).
System alerts with an audio signal during lowering and raising operation.
A loud siren output in case of alarm or emergency.
Can be lowered or raised automatically in case of emergency (User's preference).
Can be lowered and raised manually in case of power failure or during the maintenance service with manual pump and manual valve feature.

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Automatic raise up mode deploys (optionally with synchronized loop detector) the road blocker after the vehicle has passed over.
Sensor controlled stopping both at the top and bottom positions of the blocker unit.

Power Unit : Motor, hydraulic pump and solenoid valves are contained in an easily accessible hot-dip galvanized and electrostatic powder painted cabinet with a built-in lock lid. (Opt. Stainless Steel Cabinet)
Cabinet Dimensions: 1000x570x1200mm (WxLxH)

Blocker Cabinet (underground unit) : All parts are colored with industrial paint with two components.
U-shaped profile structure for maximum strength.
The blocker and cabinet are designed so that no vehicle crashing effect can displace it after embedded or installed into the ground.

Blocker Unit (impact blocking unit) : All parts are colored with industrial paint with two components.
Hot dip galvanised vehicle pass through surface (top plates).
The construction is aesthetically and functionally completed with reflecting strips and warning signs.
The hinge system is specially designed to have a flattened surface level with the top plate so that vehicles can pass over smoothly and quietly. With the help of hidden hinge system feature during the upward/downward running operation the gap at the blocker top plate back-edge and cabinet housing stays at 2mm maximum providing a critically important safety feature during operation of the road blocker.
The blocker unit is made of a reinforced construction strengthened by 6mm thick special design, V-formed, vertical solid steel panels distanced between 350-550mm along the blocker width and assembled together with the main chassis for evenly distributed impact absorption. All vertical impact absorption panels have special shape and contain hook type holders (patent pending 2015/12506) for high impact resistance and are installed with equal distance to each other and supported by 4 pieces of 30x10mm solid steel beams to further strengthen the construction.

| Impact Absorbing Panel Quantity | | | | | | | | | | | | |
|---------------------------------|------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|
| Blocker Size | 1 mt | 1,5 mt | 2 mt | 2,5 mt | 3 mt | 3,5 mt | 4 mt | 4,5 mt | 5 mt | 5,5 mt | 6 mt | 6,5 mt |
| Single Piston | 4 | 4 | 6 | 6 | 8 | 8 | 10 | | | | | |
| Double Piston | | | | | | 10 | 12 | 12 | 12 | 15 | 18 | 18 |

To stop severe impact loads there is an additional 6mm (optionally 10mm) thick sheet metal attached to the vertical impact absorption panels.
At the frontal crash-facing section, there is replaceable 3mm thick steel sheet with rounded form to handle light impacts.
Resistance of crash surface consisting of 6mm+3mm sheet metal is equal to resistance of a 74mm thick sheet metal due to its construction structured with vertical solid panels and 30x10mm solid bars behind.
Top panel where the vehicle pass over is made of 10/11mm thick non-slip surface steel hot dip galvanised before paint.
The system moves up and down with 50mm diameter stainless steel hinges (example: 3 meter blocker contains 7 pieces of 50mm diameter stainless steel hinges).
Blocker unit raises 45° angle from the ground level and equipped with built in indicators on side and front panels.
A top lid is provided for easy access for service and maintenance on the top plate.

Control System : **Manual Control Button Unit:**
Provided with an IP67 CRM yellow box including 3 switches for downwards, upwards, stop (optional emergency operation), can stop the block motion with the command/signal coming from detector, equipped with built-in LED visual indications and 10mt cable.

Compatibility with Access Control Systems:
Can be utilized through, card reader, finger print, biometric systems and similar any kind of access control systems (by third parties)1

Optional Unit
With the optional model "RB CONT.UNIT.V.001" users can monitor the diagnostic functions, can be accessed through LAN, RS485 protocols. System is provided inside a metal cabinet that also includes the other functional switches like downward, upward, stop, emergency operations.

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With the built in 124x68 LCD screen, all status of the operation and system diagnostic can be monitored through messaging functions like oil status, loop or beam detectors status, water level inside the cabinet, blocker position according to user preference, any .bmp files can be displayed. The system is driven by the PLC.

Optional Features and Accessories

: Traffic lights (red-green), Traffic light Pole, Loop Detector (double/single contact), Beam Detector, 220V or 24V DC motor, Remote Control (receiver and transmitter are 3 channels), UPS, PhotoCell Sensor (receiver+ transmitter with 50cm height pole), RB CONT. UNIT.V.001 Control Unit, Intercom, External Buttons, Emergency Submersible Pump (9000 lt/h or 18000 lt/h), Hydraulic Accumulator for emergency fast raise up (1 piston or 2 pistons systems), Surface Frame (sizes: from 250mm to 1000mm), Oil Cooler, Oil Heater, Heater for electronic components, hot-dip galvanization for cabinet, blocker and impact facing surface units, double effect hydraulic unit, double speed hydraulic unit, ground mounting plate, powered audio signal (siren), PLC diagnostic monitor, IP67 box (for PLC, SMPS, connectors etc inside power unit).

Installation

: Easy Installation with C30 grade concrete.