

# HIGH SECURITY ROAD BLOCKER.



**INAMDAR ADVANCE SECURE SYSTEMS (IASS).**



**AUTOMATED SECURITY ROAD BLOCKER**

**ROAD BLOCKER - MAX-RB 12000 K.**

## **PRODUCT DESCRIPTION.**

MAX RB 12000 K is a Security Road Blocker, which prevents force entry of unauthorized vehicles in secured areas.

Designed to withstand substantial direct impact forces, the Road Blocker has the ability to provide Impact Resistance of 6600 NM, (7.5 Ton mass vehicle travelling at a speed of 80 Kmph) which is equivalent to ASTM F2656, / IWA14-1:2013 / M50 P1 standards Effectively mitigates and protect sites from extreme, aggressive vehicular attack.



### **MAX RB 12000 K Rising Blocker.**

The Road Blocker can be customized to interface with a wide range of access control equipment to suit specific customer requirements.

Available configurations include (but are not limited to) inductive loop systems, card readers, communication equipment and manned guard emergency system.

Designed and manufactured by IASS with a wealth of experience in the field of High Security and Access Control, the RB 12000 K is a highly dependable security product that will easily interface with a wide range of other access control equipment.

## **FURTHER DESCRIPTION.**

Electro-Hydraulically operated Automated Road Blockers are available in Length 3 /6 meters or as per site requirement and can be operated Independently.

Raise & lower times 04-8 seconds depending upon size and site requirement.

Optional emergency fast raise < 2 second is also available.

Blocking / Guarding Height will be standard 1000mm. We can also provide a blocking height of 1300mm which is optional.

The Hydraulic and Electrical controls are housed in the Hydraulic Power Unit cabinet ( HPU ) which is normally installed within 8 meters of the Road Blocker unit.

Access to the cabinet is via two removable/openable doors, one at the front and one at the rear, these are secured using two cam barrel locks at the top of each door.

HPU cabinet and Road Blocker assembly are sand/shot blasted, zinc primed and finished in a high quality RAL color coded enamel paint.



*Illustration HPU-001. Cabinet large*

The Road Blocker wedge has a single inspection hatch, to enable access for maintenance, which is fastened by six M12 steel dome- head bolts. Steel side panels give access to limit switches and bearing blocks.

The supporting framework is constructed from fully welded, heavy structural alloy steel sections and box sections completely encased in galvanized steel sheet to provide a self-shuttered module and corrosion protection.

Sub-surface fixing points, tie-bars and post installation fixings ensure the Blocker is completely secured to its foundation.

A rainwater drain line is provided at the bottom of the unit and is connected to the rainwater chamber with sump pump.

A 200mm dia LED flashing light is provided at the center of the front impact face of the Road Blocker unit for clear visibility when the Road Blocker is in blocking condition.



**Road Blocker Fabrication Facility**

**GENERAL SPECIFICATION.**

**Physical dimensions:**

Blocker segment length:	3000mm	3500mm	5000mm	6000mm
Blocker frame length:	3210	3650	5210	6210
Blocker frame width:	1200	1750	1200	1200
Blocker frame depth:	1500	1500	1500	1500
Excavation Width:	2000	2500	2000	2000
Excavation Length:	3800	4200	5800	6800
Excavation Depth:	1800	1800	1800	1800
Blocking Height:	1000	1300	1000	1000

Standard HPU cabinet dimensions:  
 HPU cabinet concrete foundation support:

W: 1200mm x D 1200mm x H 1200mm  
 W: 1500mm x D: 1500mm x H: 300mm.

### Electrical requirements:

Electrical Supply	Value	Tolerance	Comments
Supply Voltage (V ac)	415	+10% or -10%	OVP/UVP should be installed
Supply Voltage Frequency (Hz)	50	+10% or -10%	
Drive Power Rating: Current Rating (A) (Current dependent on Equipment supplied and may vary)	3.7 KW  Up to 20A		TEFC IM Three Phase.  The Blocker should be protected by a type MCB & Thermal overload protection.
Maximum power cable size (mm2)	6		
Maximum signal cable size (mm2)	2.5		

### **Construction:**

All welded steel construction, self-shuttering for ease of installation. Pivot shaft: 100mm bright steel rotating in high impact nylon bearings.

HPU Cabinet – 2 mm Steel housing and door.  
Locking : Door lock securing the inspection hatch.  
2 cam barrel locks on each HPU cabinet door.

### **HPU:**

The Hydraulic Power pack uses an electric motor driven pump to actuate the hydraulic ram, this in turn raises and lowers the blocker wedge.

A hand pump for manual raise and lower facilities is provided and is incorporated in the HPU cabinet.

The hydraulic power pack oil tank is mounted at the base of the HPU enclosure and is fitted with an oil level \ temperature level indicator. The positive displacement pump draws fluid from the reservoir, through a suction filter, and delivers it through double steel braided hoses, at high pressure to the cylinder in the blocker. Raise / Lower directional controls is provided by the use of a solenoid control valve.

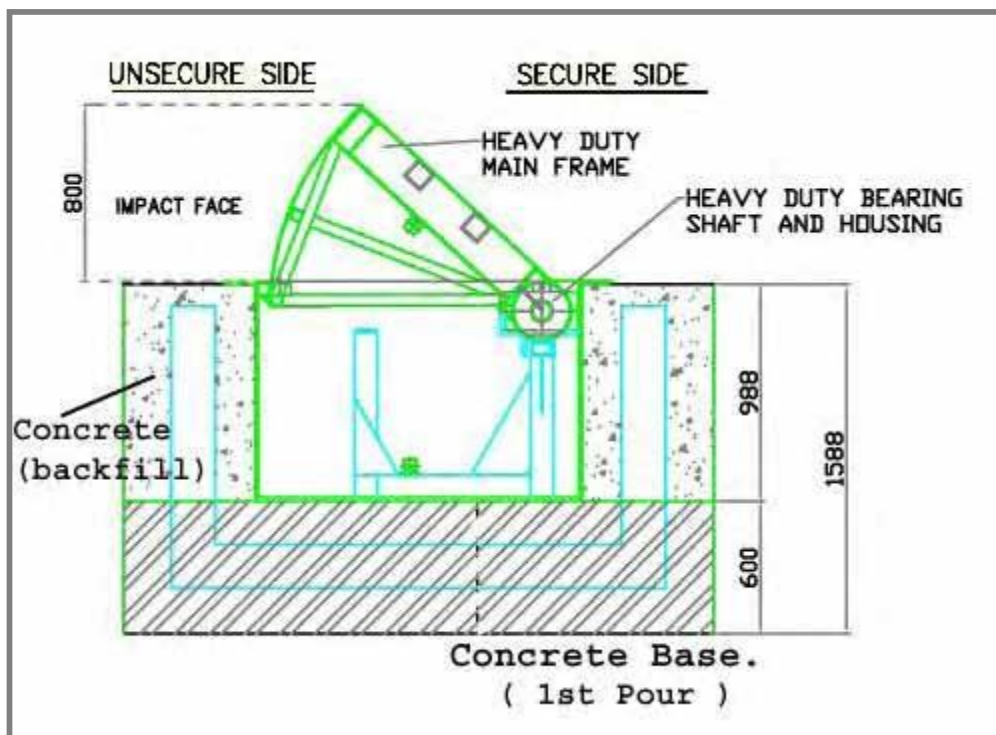
A relief valve prevents excess pressure being generated in the system and a flow control valve is fitted to allow adjustment of the lowering speed.

Where emergency Fast Raise or power fail backup is installed, the hydraulic ram may be powered from a pressurized nitrogen accumulator which can be sized to give single or multiple raise operations (Optional).

## INSTALLATION GUIDELINES.

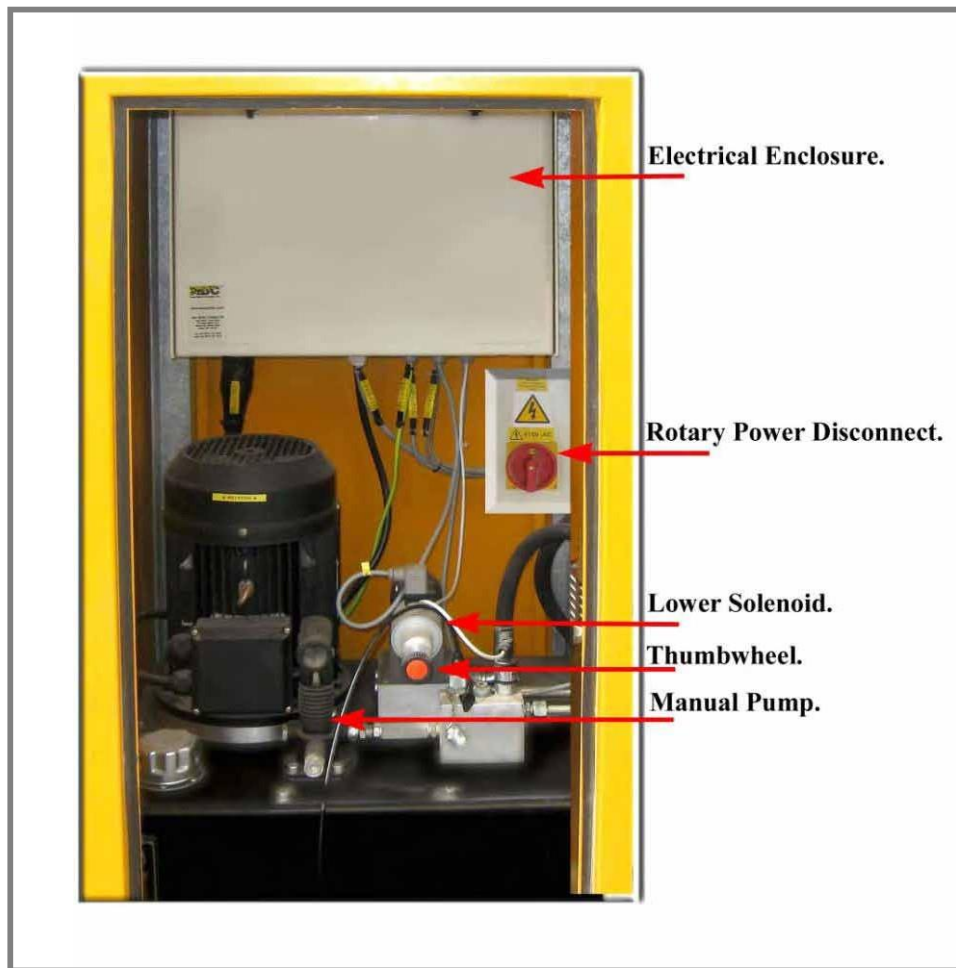
Installation may be broken down into the following stages:

- Excavation of Blocker pit and construction of underground Pit.
- Installation of 100mm conduit for hoses and signal cable.
- Construction of sump pump pit (Rainwater Chamber)
- Installation of Rainwater drain pipe lines.
- Fabrication / Reinforcement of rebar cage.
- Construction of Blocker foundation base. Installation of Blocker unit.
- Backfilling of Blocker pit with RMC.
- Installation of inductive road loops (Optional). Mounting of Signal traffic lights (Optional).
- Construction of HPU cabinet base.
- Installation of conduit for power / signal and access control cables. Pulling of cables and hoses.
- Positioning of HPU cabinet. Connecting power cables and hoses.
- Commissioning, Testing and operational training.



*Figure for illustration purpose only.*

## **COMMISSIONING.**



*Illustration HPU-002. Cabinet.*

Ensure that the Blocker transit straps have been removed. These are two steel strips bolted across the blocker frame and the front of the rising wedge.

### **Manual Raise and Lower:**

Refer to: *Illustration HPU-002. Cabinet.*

The Blocker should initially be raised and lowered using the manual pump in the following manner: Insert the pump handle (stored behind the vertical frame strut), into the manual pump socket and pump up and down until the blocker raises.

It may require several strokes to build up the initial pressure.

If the Blocker appears to be lowering, then it is possible the hoses have been connected the wrong way round and this should be checked and rectified.

The Blocker may then be lowered by using the manual pump in conjunction with the Lower solenoid: Turn the solenoid thumbwheel clockwise until finger tight (do not overtighten) pump the handle up and down until the Blocker lowers.

Check for oil leaks at both ends of the hoses and tighten where necessary. Check all fastenings and mounting bolts are secure.

Check Blocker is centrally located within the frame and that the limit switch pick-up lugs are in line with limit switches. Check hydraulic fluid level is above the minimum level on sight glass. Top up oil if nec

## **LOOP DETECTOR.**

The loop detector unit can usually be found in the top right of the electrical panel. Different models may be fitted, depending on site specifications, but basic functions remain similar, the status LED on the front of the detector unit should change colour as a vehicle or other metal object passes across the road loop. This can be tested either using a vehicle or a steel object laid on the road over part of the loop.

Sensitivity can be adjusted and frequency can be changed. User instructions may be found on the front and side of the detector unit or in the information sheet supplied with the equipment.

Note that the detectors are self-adjusting; if the mains power is switched off, when it is switched back on again the detector will measure the inductive field and reset itself to match its surroundings. This can be used to reset a detector that is outside its correct range. Care should be taken to see that no vehicle or other metal object is on the loop area when the mains power is switched back on as this may cause false detections.

Manufacturers instruction sheet for Loop detectors may be found in the reference section of this manual.



*Illustration Elec-005.Nortech loop detector*

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