

Procurement Specification for a Rising Arm Barrier

EB950 Triumph Barrier

A. Requirement

This document is to be used to specify the physical and operational requirements of the EB950 Triumph Rising Arm Barrier.

The EB950 Triumph Barrier is ideal for controlling access and traffic on wider roadways. The barrier can be applied in dual width roadways (2.5m to 9m); and can be used to achieve vehicle air-locks and areas where personnel access points needs to be restricted, and can be fitted with half and full height skirts.

It can easily integrate with access control systems and is recommended for a wider road width.

B. Barrier Unit

B.1 Barrier Construction

The all steel constructed cabinet, door and lid shall be manufactured from 3mm CR4, and stand 1160mm above the foundation level. The cabinet, door and lid shall be shot blasted and primed with a two pack high zinc primer, 40 microns, followed by a textured polyester powder coating in yellow (RAL 1007 other options available), 40 microns thick.

The side arm shall be constructed from heavy steel located on the main shaft with a spring pin, with 2 x M12 x 25 grub screws located on the end of the shaft to prevent movement.

The lid shall be retained internally at the front and rear of the cabinet and accessed via a key lockable hinged door.

Barrier arm shall be constructed from corrosion proof GRP (glass reinforced polymer), supplied with alternating, traffic grade, reflective, red and white bands. Boom end supports and straining wires are required for booms in excess of 5 m or where collapsible skirts are fitted. The barrier will be counterweighted appropriately in accordance with boom length and optional equipment specified for the boom. Barrier arm max length 9m

B.2 Barrier Height

The height of the Barrier Arm when in the closed (lowered) position, as measured from the top of the Arm frame to the road surface, will be a minimum of 900mm in accordance with BS6571 part 4.

B.3 Barrier Width

The width of the Barrier Arm will be between 2,500mm and 9,000mm to suit site conditions.

B.4 Finish

The Barrier Cabinet and Boom Arm are to be finished with an anti-corrosion paint system.

C. Technical Details

C.1 Operation

The high duty cycling Linear 24VDC 400W Actuator shall connect to the drive shaft via a torsion arm and provide an operating speed of under 10 seconds. An industrial grade nitrogen gas strut shall be used to provide smooth operation counterbalancing and damping to the unit.

C.2 Actuator

The Linear Actuator shall powered by a transformer. Limit switches will be triggered by cams on the main shaft to control the raising and lowering of the barrier.

The drive unit shall be protected by a thermal cut-out mounted on the electrical panel

C.3 Power fail conditions

A winding handle will be provided to enable the manual raising and lowering of the Barrier Arm in the event of electrical power failure.

C.4 Casing

The Barrier Cabinet will have fully lockable doors to the front of the cabinet for ease of access.

C.5 Side arm assembly

The side arm assembly will be fabricated from heavy steel and be attached to the shaft via a M12 x 80mm spring pin and rotating in 2 x LDK bearings. The shaft shall rotate through 85 degrees by the action of the linear actuator, with purpose of the V-bracket is to allow the arm to pop out under impact and reduce the likelihood of damage to the arm.

D. Control System

D.1 Voltage

The main system input voltage is to be 230v (+10% to -15% tolerance) 1phase 50-60Hz supply with the control system operating at 24V SELV provided from an internally mounted power supply. (International voltages shall be available)

D.2 Casing

The control system will be housed in a general purpose IP54 rated housing with a power isolation switch mounted externally for safety. The housing will

be located inside the main Barrier Cabinet and should give easy access to all electrical components for connection, maintenance and programming.

E. Access Control

E.1 System Interfacing

The control system will be capable of accepting inputs from every major type of access control including but not limited to – Push buttons to raise, lower and emergency stop, swipe/proximity card readers, communication equipment, inductive loop systems, RF transmitter equipment and biometric readers.

The system must be able to interface with other equipment (by other manufacturers) to create an interlock.

F. Performance

F.1 Manufacturers Experience

The manufacturer of the Rising Arm Barrier will have a minimum of 20 years experience in the manufacture, installation and maintenance of this type of equipment and must be a member of a recognised Professional Trade Association.

F.2 Speed of operation

Standard operation speed will be 10 seconds for either raising or lowering.

In normal operation the Rising Arm Barrier shall be capable of a high duty cycling and must have been satisfactorily factory tested in a single continuous run of 1,200 cycles.

Technical summary

1. Electro-Mechanical drive unit
2. High duty cycling
3. Speed of operation 10 sec
4. Modular design
5. Multi-process coating specification
6. Winding handle for manual operation
7. Power requirement 230V single phase 50Hz 6A
8. Operating temperature range available: -25°C - +70°C
9. Cabinet- 410mm W x 450mm D x 1160mm H
10. Barrier Arm Length Max 9m
11. Fully assembled the main unit weight is 185Kg
12. 15mm thick counterweight approx. 16.5kg
13. 10mm thick counterweight approx. 11.5kg

G. QA

G.1 Equipment Testing

The manufacturer will have fully tested the Rising Arm Barrier and Control System prior to despatch. These tests will be fully traceable to each unit despatched and must be transparent.

The QA testing will include dimensional checks, workmanship quality and finish as well as full operational testing. Once fully tested, the Rising Arm Barrier will be fitted with a nameplate bearing the manufacturers details, serial number and test date.

The manufacturer's quality system must be certified to ISO 9001.

G.2 Despatch

The Rising Arm Barrier will be packed ready for despatch with cardboard sheeting strapped to the outer casing for protection. The structure will be substantial enough to enable lifting from either below or above without incurring damage or warping.

Two full sets of operation and maintenance manuals will be provided with the equipment to include site specific program, wiring and installation drawings (additional manuals should be available at a nominal cost).

H. Disclaimer

This type of equipment is designed for security use and while it is possible to integrate a number of safety features into the system design, it is generally better to provide adequate traffic calming measures, signage, area illumination and traffic lights to warn users of the potential hazard.

Avon Barrier Corporation Ltd can provide information on safety systems to suit most sites / applications on request.

It is strongly recommend that advice is taken from relevant security or safety engineers with regard to the system design, alternatively Avon Barrier Corporation would be pleased to provide such information – contact our Security Department at our UK offices.

I. Procurement Source

The EB950 Triumph Rising Arm Barrier can be purchased from the following sources:

Avon Barrier Corporation Ltd
149 South Liberty Lane
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BS3 2TL UK
Tel +44 117 9535252
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