

Procurement Specification for a High Impact Sliding Gate (HISG)

SG1500 CR High Impact Sliding Gate

A. Requirement

This document is to be used to specify the physical and operational requirements of the SG1500 CR High Impact Sliding Gate (HISG) for use in high security environments. Each system will be comprised of a number of HISG's with associated Drive Units, Control Systems and Access Control Equipment.

The SG1500CR is a specialised blocking system for use in circumstances where protection from combined anti-personnel and anti-hostile vehicle attack is required.

B. Gate Unit

B.1 Gate construction

The gate leaf is to be constructed using a mild steel frame with an high tensile steel central blocking bar and additional wheel level stopping bars. The gate leaf is to be designed to accept a wide range of decorative or protective infill which can be added without negating the impact resistance of the gate. Additional facility is to be made to accommodate gate topping protection which will also allow the gate height to vary without compromising its impact protection.

The gate is mounted on a drive track and is supported at both ends by support posts mounted in shallow re-enforced foundations (less than 500mm overall depth).

On impact, the forces exerted on the gate will be transmitted through the substantial blocking bars, to the support posts and down into the re-enforced foundations. The Gate should be designed to absorb / withstand impacts from both US and European manufactured vehicles taking into account the varying weight distribution of both styles.

B.2 Gate Height

The gate will be designed as a modular unit which combines a crash tested gate leaf with site determined infill and topping to provide a site specific design that will blend with the existing perimeter design.

B.3 Gate Width

The gate width will be between 3,000mm and 6,000mm.

B.4 Finish

The Gate and support posts are to be fully galvanised however painting to match site conditions should may be provided as an option.

Gate infill / cladding and topping should also be provided as options to suit site requirements.

C. Drive System

C.1 Operation

The Drive will consist of a heavy duty motor / gearbox driving a rack and pinion.

C.2 Limit Switches

Limit switches will be fitted to provide opened and closed signalling to the control system.

C.3 Motor

The heavy duty motor used will be a 3ph unit with a power rating sufficiently sized to allow for frequent operation (50% duty cycling).

The motor must be protected from power overload by a suitable trip device.

C.4 Power fail conditions

A clutch system will be provided to enable the disengaging of the motor drive unit; the gate can then be manually opened and closed.

C.5 Casing

The drive is to be fitted into a steel outer cabinet to give protection against the elements.

The cabinet will have a fully lockable removable full length door to the front of the cabinet for ease of access.

D. Control System

D.1 Main Processor

The Drive unit will have a controller which will accept inputs from the access control system and gate monitoring equipment as well as output signals to the Drive motor, back indication system and external signalling. The controller shall be sized to suit site requirements.

All relays will be properly mounted and all interconnecting cabling must be in suitable containment running to terminal strips.

D.2 Voltage

The main system input voltage is to be 3phase 50-60Hz supply with the control system operating at 24V SELV provided from an internally mounted power supply.

D.3 Casing

The control system will be housed in a general purpose IP55 rated housing and should give easy access to all electrical components for connection, maintenance and programming.

E. Access Control

E.1 Remote Control Panel

Each HSIG will come with its own remote control panel which will be comprised of push buttons to open, close and emergency stop the equipment. The gate leaf must be able to instantly reverse on command.

E.2 System Interfacing

The control system will be capable of accepting inputs from every major type of access control including but not limited to – Swipe card readers, proximity card readers, 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 HSIG will have a minimum of 15 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 Testing

The HSIG design must fully comply with CE regulations and an actual full scale crash test must have been carried out by a qualified independent testing agency with the HSIG affording protection after the impact. The test will have consisted of the impact of a roadworthy and fully laden vehicle weighing 7,500Kg (16,500 pounds) travelling at 80 Kph (50 mph) into a single HSIG.

The impact testing must have been carried out in accordance with PAS 68 and exceed the DoS test standard SD-STD-2.01 Rev A class K12/L3.

In addition, the HSIG will be able to cause sufficient damage to a 7500 kg vehicle travelling at 80kph so as to destroy the front suspension and main drive train of the vehicle rendering it inoperative.

F.3 Speed of operation

Standard operation speed will be between 6 and 8 seconds per metre for either opening or closing, with the close speed being increased to 3 seconds per metre when the optional emergency fast close system is activated.

G. QA

G.1 Equipment Testing

The manufacturer will have fully tested the HISG, Control System and Access Control equipment 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 HSRA will be fitted with a nameplate bearing the manufacturers details, serial number and test date.

The manufacturers quality system must be certified to ISO 9001.

G.2 Despatch

The HISG will be packed ready for despatch with cardboard sheeting strapped to the outer structure for protection and lifting eye sockets provided at the relevant lifting points. 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 high 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 Company 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 Company would be pleased to provide such information – contact our Security Department at our UK offices.

I. Procurement Source

The SG1500 CR High Impact Sliding Gate can be purchased from the following sources:

Avon Barrier Company Ltd
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