

Procurement Specification for the SG1100CR Armoured Vehicle Gate

A. Requirement

This document is to be used to specify the physical and operational requirements of the SG1100CR which is a 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

The SG1100CR 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 a 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 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 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 have been designed as a modular unit which combines a crash tested gate leaf frame with site determined infill and topping. This will provide a site specific, but still crash rated, design that will blend with the existing perimeter profile in both aesthetic appearance and height.

B.3 Gate Width

Standard sizes - clear width openings/gap of 5m, 6m and 7m (in 500mm increments)

Bespoke sizes available on request, subject to conditions, contact our sales department for advice

B.4 Finish

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

Gate infill / cladding and topping may also be provided as options to suit site requirements; including ballistic protection to BR6 level (higher levels may be available)

C. Drive System

C.1 Operation

The drive will consist of a heavy duty motor / gearbox working as a rack and pinion system.

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 have a power rating sufficiently sized to allow for frequent operation (100% 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 single phase 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 IP56 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 HISG will come with its own remote control panel which will be comprised of push buttons to open, close and emergency stop the equipment. The push button controls will be hold to run as standard.

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 HISG 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 Testing

The HISG design must fully comply with CE regulations and be fully crash tested by a qualified independent testing agency, with the HISG 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 64 KPH (40 mph) into a single HISG.

The impact testing must have been carried out in accordance with PAS 68.

In addition, the HISG will be able to cause sufficient damage to a 7500 kg vehicle travelling at 64kph 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 5.7 seconds per metre for either opening or closing.

For higher security areas, a high speed drive option can be provided increasing the speed to 2 seconds per metre. This would give an opening /closing time of 10 seconds for a 5 metre gate.

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 HISG 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 HISG will be suitably packed ready for despatch 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.

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 strongly recommended that a safety / security risk assessment is carried out prior to specifying the product and any necessary safety systems.

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

I. Procurement Source

The SG1100CR High Impact Sliding Gate can be purchased from the following sources:

Avon Barrier Corporation Ltd

149 South Liberty Lane

Ashton Vale

Bristol

BS3 2TL

UK

Tel +44 117 9535252

Fax +44 117 9535373

Email sales@avon-barrier.com