Specification
&
Procurement Guide
for
GloBoll

Contents

1.0 Scope

This specification defines the procurement of the ATG Access Ltd GloBall automatic bollard.

The basic system comprising of one or more vertical rising bollards operating independently or in sets as either a single direction, bi-directional or twin lane configuration, a hydraulic power unit, control cabinet containing the controls and logic circuits, traffic indicator and further options.

2.0 System Configuration

2.1 Bollard(s)

The system shall have a total of (enter quantity) installed as in accordance with 2.1.1 or 2.1.2.

Select either 2.1.1 or 2.1.2 plus a, b, or c to define the operating pattern of the bollards within the system and delete the one not applicable.

2.1.1 Single bollards individually operated.
Each individual bollard shall be operated independently from any other bollard with in the system. Each bollard shall have its own controls and operate under one of the following configurations:-

A) Single Direction. Traffic flows in one direction only through the bollard system.

B) Bi-Directional. Traffic flows in both directions through the same bollard.

2.1.2 Multi bollards operating in sets.
The bollard system shall have (enter quantity) bollards operating together as a set. Each set of bollards shall have its own controls and operate independently of other systems under one of the following configurations:-

A) Single Direction. Traffic flows in one direction only through the bollard system.

B) Bi-Directional. Traffic flows in both directions through the same bollard

Bollard Construction.

The bollard shall be a below ground assembly consisting of a cylindrical outer casing complete with cable and drainage duct outlets and an inner bollard of mild or stainless steel cylindrical tube capable of being raised above ground into the up position. In the raised position the bollard shall present a formidable obstacle to approaching vehicles. Upon impact, forces shall first be absorbed by the inner bollard and then transmitted to the outer casing and foundation.

2.3 Bollard Height

Height of the bollard in the raised position shall be 700mm as measured from ground level to the top of the inner bollard.

2.4 Bollard Dimensions

Outer Casing: 406mm Diameter
Inner Bollard: 273mm Diameter
Aesthetics: Black or Stainless Steel

2.5 Hydraulic Pack & Circuit

The bollard(s) are driven up and down by a hydraulic pump housed within the bollard casing. They will drive the bollards upon command from the main control system housed in a suitable cabinet/box in proximity to the bollard system

The hydraulic circuit shall include all necessary control logic, hydraulic hoses, quick release connectors and valves. Normal operation will allow the bollards to lower in the case of a power fail. In security applications the hydraulic circuit must be flexible enough to allow the bollards to remain in the raised position in power fail. This must be specified at the time of order.

2.6 Power Fail

In event of power failure the bollards will lower to the down position.

3.0 Control & Logic Circuits

3.1 Control Circuit.

A control circuit shall be provided to interface between the bollard(s), traffic ligts (if required), safety and tracking induction loops (if required) and the hydraulic pumps. This circuit shall contain all relays, timers and other devices necessary for all the operations of the system as defined. All control equipment shall be situated above ground and within the main control cabinet

3.2 Voltage

The control circuit shall operate from a 240/110 volt, 50Hz single phase supply. An internal transformer shall reduce this to 24VC for all external devices.

3.3 Control Box/Cabinet

The control board and access control equipment shall be housed in a weatherproof box, or a steel cabinet sufficient to house all the control circuits, and other devices for operation of the system that do not require external visibility (e.g. Radio Receiver) The control panel should have a mains power supply isolator.

3.4 Traffic Lights (If specifying an autorise system)

Traffic Lights are required for systems were the bollards are to rise automatically. Traffic lights should comprise separate red and green lights.

The green light shall indicate when it is safe to proceed. All other bollard positions shall cause the light to show red. External devices required for the operation of the system are housed on the traffic indicator column.

Specifying the Correct Number of Traffic Lights	
Operating Configuration	Number of Traffic Lights
Single Direction	1
Bi - Directional	2
Repeater Traffic Lights may be Specified when necessary. Please contact the manufacturer for details.	

3.5 Induction Loops

Strategically positioned induction loops will allow the control system to detect a vehicle at all times and audit track the vehicle through the system. The number of induction loops required is dependant on the configuration of the system.

Whilst the lowering of the bollard(s) by timer is permitted the raising of the bollards must not be carried by timer. This needs to be carried out in a safe manner.

4.0 Performance

4.1 Experience

The bollard system shall be manufactured by an ISO9001 company that has over 500 automatic bollard systems installed and in around the world with documented logs of all major components and design features.

4.2 Speed of Operation

Normal speed of operation shall be capable of raising or lowering the bollards between 4 and 8.5 seconds when operated at a repetition rate not greater than specified in 6.3. The control system shall be capable of reversing the bollard upward cycle at any time on a valid demand from the devices controlling the system.

4.3 Frequency of Operation

The bollard shall be capable of **500** up/down cycles per day.

4.4 Accreditation

The bollard system shall be manufactured to ISO9001 standards and be CE marked.

4.5 Impact Resistance

The bollard is designed to withstand vehicular impacts of 60KJ..

5.0 Environment Data

The bollard system shall operate satisfactorily under the following environmental conditions:

5.1 Extremes in Temperature

The bollard system shall operate between the following temperatures.

Normal Operating Temp for Control System: 40˚C to -15˚C
Maximum Operating Temp for Hydraulic Oil: 90˚C
Minimum Operating Temp for Hydraulic Oil: - 54˚C

5.2 Rainfall

It is recommended the bollard outer casings are connected to a drain, via a sump if necessary. if this is not practical then a natural soak away should be constructed. It is imperative to note that a natural soak away should only be considered if connection to a drain is not possible; the success of a natural soak away will be dependant on the ground conditions.

6.0 Quality Assurance

6.1 The manufacture will be accredited to ISO 9001/2000

6.2 Shipment

The system will packaged in a sufficient manner for transport in the UK so that the risk to damage is minimal. Export shipments shall be crated and be of sufficient structural integrity to be lifted and transported by overhead crane or forklift truck without failure. This is subject to minimum order quantity.

7.0 Warranty

7.1 The system shall carry a full 12 months parts and labour warranty. The manufacturer must be able to extend the warranty to cover a 5 year parts and labour maintenance agreement at the placement of order if required by the client.

8.0 Manufacturer's Data

8.1 Drawings and Installation Data

Method Statements, Risk Assessments and generic drawings should be made available by manufacturer

9.0 Disclaimer

Careful consideration must be devoted to the selection, design and location of an automatic rising bollard system in the same manner as any other product that may be used to close off a roadway. Care must be taken to ensure approaching vehicles and pedestrians are made fully aware that automatic rising bollards are in operation through appropriate signage.

10.0 Procurement Details

The GloBoll automatic hydraulic rising bollard system shall be purchased from

ATG Access Limited
Automation House
Newton Road
Lowton St Marys
Warrington
Cheshire
WA3 2AP

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