VP200 and VP700 Auto Rise

Modes of Operation

This section provides explanation into the mode of operation of the bollard cycle under normal operation conditions and the access control equipment to be used on the above system.

Single Direction

A single direction bollard system is defined as controlling vehicles in one direction. The system will control the vehicles travelling through the system using a number of strategically positioned induction loops. The approaching vehicle will pull up to the traffic indicator column where it will by its position put the induction loops into detect, a valid demand can be given and the bollards will lower. Exit is not normally through the same bollards unless they are purposely held in the down position until the vehicle has left and the bollards can be safely raised.

Bi-Directional System

A Bi-Directional bollard system is defined as controlling traffic flow in both directions. The system will control the vehicles travelling through the system in both directions using a number of strategically positioned induction loops which will determine vehicle priority. The approaching vehicle will pull up to the traffic indicator column where it will by its position put the induction loops into detect, a valid demand can be given and the bollards will lower. The red / green traffic indicators positions are a major factor when installing a bi-directional system.

Twin Lane

A twin lane bollard system is defined as controlling vehicles in both directions through separate bollards segregating the Entry / Exit lanes by a traffic island. The system will control the vehicles travelling through the system using a number of strategically positioned induction loops. The approaching vehicle will pull up to the traffic indicator column where it will by its position put the induction loops for the direction the vehicle is travelling into detect, a valid demand can be given and the bollards will lower.
Access Control Options

Key Pad

Access is granted by entering a four digit code into the key pad which lowers the bollards turning the signal from Red to Green. Once the vehicle is registered on the safety loop the Green light will change back to Red, discouraging following vehicles from tailgating. The bollards will automatically rise once the vehicle has cleared the safety loop ready for the next demand.

Proximity Card Reader

All Valid Proximity card users will be accepted into the restricted area. The driver presents the proximity card to the reader situated within the traffic indicator column which lowers the bollards turning the signal from Red to Green. Once the vehicle is registered on the safety loop the Green light will change back to Red, discouraging following vehicles from tailgating. The bollards will automatically rise once the vehicle has cleared the safety loop ready for the next demand.

Radio Receiver

Access is granted by depressing the button on the key fob which lowers the bollards turning the signal from Red to Green. Once the vehicle is registered on the safety loop the Green light will change back to Red, discouraging following vehicles from tailgating. The bollards will automatically rise once the vehicle has cleared the safety loop ready for the next demand.

Two Position Key Switch

The bollards can be raised and lowered manually by the operation of the key switch located within the security office. Once the command has been given the bollards will automatically lower turning the signal from Red to Green. Once the vehicle is registered on the safety loop the Green light will change back to Red, discouraging following vehicles from tailgating. The bollards will automatically rise once the vehicle has cleared the safety loop ready for the next demand. The key switch can be programmed so the bollards remain in the down position until the key switch is activated to raise the bollards.

Vehicle Number Plate Recognition (V.N.P.R)

The vehicle must present itself over two induction loops set on approach to the bollard system, the V.N.P.R system will read the vehicle registration plate and allow access if it is recognised. On a valid command the bollards will automatically lower turn the Red signal to Green. Once the vehicle is registered on the safety loop the Green light will change back to Red, discouraging following vehicles from tailgating. The bollards will automatically rise once the vehicle has cleared the safety loop ready for the next demand.

The requirements for a V.N.P.R system are a main server located at a central office this is a one off charge for any number of cameras. One camera per traffic lane and a monitoring unit 500mm x 250mm x 400mm housed in a road side cabinet per camera. The most cost effective way of communicating between the server and the monitoring unit would be through a broadband link.
Alternatively the system can be configured to dial into the monitoring unit to download new registrations or upload information.

**BT/ GSM Telguard Communication System (Intercom System)**

Entry for non authorised vehicles will be via the telguard communication system. The telguard operates using either a basic analogue telephone line or GSM technology. The vehicle approaches the bollards and depress the call button the control room answers the call, if the vehicle is valid, press hash on the telephone handset which lowers the bollards turning the Red signal to Green. Once the vehicle is registered on the safety loop the Green light will change back to Red, discouraging following vehicles from tailgating. The bollards will automatically rise once the vehicle has cleared the safety loop ready for the next demand.

The telguard communication system can also be utilised for emergency vehicles. The control room can dial into the telguard system press a code number on the handset and then hash. This automatically lowers the bollards leaving them in the down position and turn off the traffic lights. To raise the bollards when the emergency vehicles have past through the system the control room will then dial into the telguard system press a different code number on the handset and then hash which will drive the bollards back into the up position, this must be carried out in a safe manner through monitoring the system with CCTV, alternatively they can be manually reset at the roadside cabinet.

**Signage**

It is very important to inform vehicles that a bollard system is in operation. Safe and clear operating instructions are required for the system users. Standard sign packs are available at an additional cost.

**Safety**

The automatic bollard system adheres to a risk assessment level 3 European directive, the bollard system gained full type approval from the Highways Agency in 1998. The requirements of a safety system to control this category of risk assessment are as follows (extract from section 7 of EN954-1).

“Safety devices and control systems as a minimum must be designed, selected and assembled to meet the operational requirements of design limits and influence of the process materials and other external influences. The complete safety control system shall be designed so that any single fault shall not lead to the loss of the safety function and, where practical, the single fault shall be detected. This now calls for not only redundancy in the interface but also in the input devices, pointing to dual channel systems”.

The ATG Bollard Safety System complies with the EN954-1 and as such you can rest assured that your bollard system meets the highest safety standards available.
**Emergency Services**

The most basic control is at each of the bollard locations, the control cabinet is located within 8m of the bollards. Every system has a manual over ride located on the side of the control cabinet. The emergency services can fit their own lock / padlock if ATG Access’s standard locking system is not acceptable. When unlocked the side panel can be opened and the override button pressed to automatically drive the bollards down. The system would then require re-setting once the emergency had cleared.

**Power Fail**

In the event of a power fail the bollards will automatically lower into the ground under a fault condition. Once power is restored the system will have to be manually reset in a safe and controlled manner.

**Civil Installation by Others**

Civil installation to be carried out by the main contractor and connection to a drain is recommended. The civil installation also includes the laying of induction loops in accordance with our method statement,

ATG Access can carry out the laying of the induction loops at an additional cost of 250.00 + Vat per loop if required

ATG Access will provide site drawings and duct layouts for the above bollard system upon receiving order confirmation.

**Electrical Installation by ATG Access**

Electrical installation and commissioning of the system by ATG Access engineers.

The quotation assumes that all the work is completed to an agreed schedule. Should ATG Access engineers have to return to site due to civil, electrical supply or any other circumstances beyond our control then an additional charge will be made at the appropriate rates.
**Inclusions**

1. We have assumed free and unrestricted access to site and work face during MON – FRI 8am – 17.30. Any working outside these hours will incur additional charges unless already included for within our quotation.

2. We have included for the reinstatement of surface finishes (excluding block paving, granite, marble, tiles)

3. We have included for all Plant requirements to carry out the project.

4. Our price is currently a budget figure until we are in possession of the drawings

5. Road Closure by others

6. Traffic Management by others

7. Assumed road surface is Tarmac unless otherwise stated. Any alternative surface will incur an additional charge

8. We have excluded any road sweeping or cleaning down of the road surface are upon completion of our works.

9. To be carried out at the same time as civil installation

**Exclusions**

10. We have excluded any unloading

11. We have excluded any diversion or lowering any buried services.

12. We have excluded any requirement for hand digging around services.

13. We have excluded any hard breakout of any unforeseen obstructions.

14. We have excluded the removal of any features, bollards, planters, barriers, blockers and the like unless otherwise stated.

15. We have excluded any power supply.

16. We have excluded any specialist foundation design

17. We have excluded welfare facilities.

**Assumptions**

18. We have assumed that there are no noise restrictions.

19. We have assumed there is free and uninterrupted access to our work area.

20. Without the layout available we have assumed that the bollards are laid in a straight line.
Electrical Installation and Commissioning

Inclusions

1. We have assumed free and unrestricted access to site and work face during MON – FRI 8am – 17.30. Any working outside these hours will incur additional charges unless already included for within our quotation.

2. We have included 1nr continuous visit. Any subsequent visits will be charged at £750.00 each visit.

3. We have included for all small tools to carry out the project. Any requirement for the cabling to be installed at high level will incur additional charges.

Exclusions

4. We have excluded any power supply.

5. We have excluded welfare facilities.

6. We have excluded any road closures and any liaising with the local authority.

7. We have excluded any meter installation.

Assumptions

8. We have assumed that there are no noise restrictions.

9. We have assumed there is free and uninterrupted access to our work area.

10. We have assumed that all ductwork has been installed to our standard details and each duct contains drawstring and is located in the correct position.

11. We have assumed that we can locate our vehicle close to the work face.

12. We have assumed that there is a competent site manager.

13. We have assumed that the area of work has been cordoned off to the satisfaction of the HSE.

14. We have assumed that there is power supply already in place and meter (if required) as per our requirements detailed within this quotation.
Availability

7 to 9 weeks from receipt of official order

Validity

This quotation will remain valid for 90 days from the above date

Payment Terms

Subject to suitable references (ATG Access terms & conditions apply)

Warranty

All equipment is covered by our comprehensive warranty for 12 months following commissioning of the system. We also offer an additional 24 month service plan that breaks down a charge of £500.00 every 6 month.

A maintenance agreement is available which includes preventative maintenance during the first year. Proactive servicing helps to ensure maximum life of the system is obtained with minimum downtime and reduced cost of ownership. We recommend as with all electromechanical / electronic equipment that a maintenance schedule is agreed and implemented. Our service department will be pleased to discuss your requirements, we aim to offer you the level of service that meets your expectations, this can include extended warranties of up to five years on all parts & labour along with a national next working day callout service.

We trust the above meets with your approval and look forward to receiving your further instructions.

Yours sincerely

Neil Perrin

Sales Consultant

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