BLG77

ENGINEERING SPECIFICATION

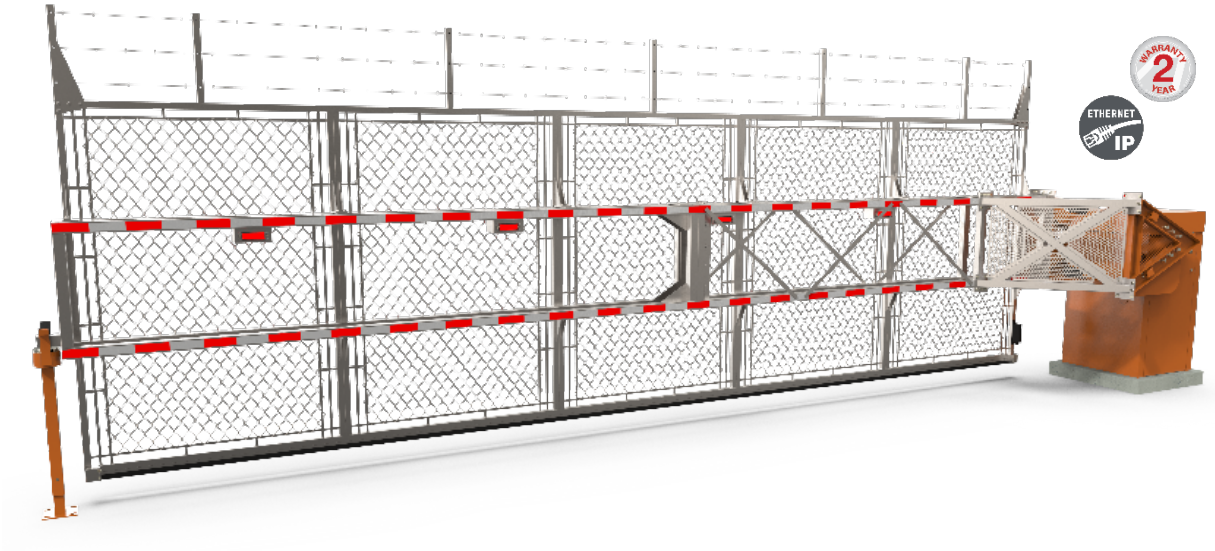
NAM-BLG77-ES-EN-G

AUTOMATIC SYSTEMS

Leading the way to future safety and security

BLG77

Rising Fenced Barrier



Engineering Specifications

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ENGINEERING SPECIFICATIONS

BLG77 Rising Barrier

SECTION 08 34 56 – Security Gates

SECTION 11 12 33 – Parking Gates

SECTION 28 13 00 – Access Control

SECTION 34 71 13 – Vehicle Barriers

PART I – GENERAL

1.01 SECTION INCLUDES

A. This section covers the furnishing and installation of a rising fenced barrier.

1.02 REFERENCES

A. The rising fenced barrier gate must be certified by a nationally recognized laboratory such as ETL or UL according to UL 325 – Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.

B. The rising fenced barrier gate must be certified by a nationally recognized laboratory according to CAN / CSA - C22.2 no. 247-92 (R 2008) – Standards for Operators and Systems of Doors, Gates, Draperies, and Louvers.

1.03 SYSTEM REQUIREMENTS

A. The rising fenced barrier must control and restrict vehicle and pedestrian traffic between secured and unsecured zones.

B. Must feature a rising fence to block vehicles and pedestrians and prevent access to restricted areas without authorization.

C. Must be mechanically locked when in vertical (up position), and the horizontal (down position).

D. Must be bidirectional and able to operate automatically, allowing traffic in both directions.

E. Must be configurable in one of three (3) states:
   1. Open - fence remains in the open or up position.
   2. Closed - fence remains in the closed or down position.
   3. Automatic - fence is normally in the closed position and controlled by the associated entry/exit hardware.

F. Must be able to use the access control system to grant or deny access to the facility and operate with a variety of user authentication devices such as card readers, ticketing systems or barcode reader systems.

G. Must permit the operator to manually raise and lower the gate.

H. The fence must be made of aluminum.

I. Bottom of fence will be provided with safety edge to prevent it from closing on a vehicle.

J. Design of the unit must provide visual and audible notifications for intuitive process.

K. Can be used in a standalone barrier or primary/replica configuration for up to 49 ft 3 in [15 m] clear passage.

L. Must be equipped with the entrapment protections required to satisfy UL325 and CAN/CSA -C22.2 no. 247-92 (R 2008) standard conditions.

1.04 SUBMITTALS

A. Submit product data: equipment description, dimensions, electrical wiring diagrams for installation, and manufacturer's technical manuals on each product to be used, including:
   1. Site preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
   4. Operation and maintenance manuals.

B. Provide shop drawings and indicate component connections, anchoring methods, and installation details.

1.05 DELIVERY, STORAGE AND HANDLING

A. Deliver equipment to job site in manufacturer's original packaging to prevent damages, and with complete installation instructions.

B. Store indoors in a controlled environment, protected from construction activities and debris.

1.06 PROJECT/SITE CONDITIONS

A. Install the rising fenced barrier on a leveled concrete base as per implementation drawing.

1.07 QUALITY ASSURANCE

A. The rising fenced barrier must be manufactured in North America.

B. Manufacturer Qualifications:
   1. Manufacturer must be a company specialized in designing and manufacturing rising barriers with a proven minimum experience of fifteen (15) years.

C. Source Limitations: obtain the rising fenced barriers from Automatic Systems.

1.08 WARRANTY

A. Automatic Systems warranties its products against parts defects for a period of two (2) years from the date of invoicing. This warranty excludes normal wear on finishes or damage that occurs due to abuse or misuse. Obtain full warranty terms from Automatic Systems.

PART II – PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: subject to compliance with requirements, provide products by the following:
   1. AUTOMATIC SYSTEMS AMERICA INC, 4005 Matte Boulevard, Unit D, Brossard, Quebec, J4Y 2P4, CANADA
      Phone: 800 263 6548
      Homepage: www.automatic-systems.ca E-mail: sales.nam@automatic-systems.com

B. Products:
   1. Rising fenced barrier, Model BLG77

2.02 CONSTRUCTION

A. Cabinet
   1. Inner frame must be manufactured from steel with thickness up to 5/8 (16 mm). Corrosion-protected by powder coat paint (standard color: orange).
   2. Enclosure panels must be manufactured from 1/8 in (3 mm) thick aluminum. All panels must be painted with a powder coat paint (standard color: orange).

B. Doors and cover
   1. The cover and doors must be removable to allow easy access to both the electro-mechanical drive and electronic control units.
   2. The cover and doors must be locked by key.
   3. The doors and cover must be manufactured from 1/8 in (3 mm) thick aluminum with a powder coat paint (standard color: orange).

C. Support structure for the fence
   1. Must allow the assembly of the fence panel on the right or the left.
   2. Fence frame to be manufactured from aluminum tube with red and white reflective strips.
   3. The structure must be in 2 sections.

D. Fence
   1. Fence to be manufactured in 4, 5 or 6 aluminum modular sections (height: 6 ft, 8 ft or 10 ft / 1.8 m, 2.4 m, or 3 m)
   2. The fence sections width must allow the assembly of a fence of 16, 20 or 24 ft [5, 6 or 7.4 m] long.
   3. Wire mesh to be in aluminum.
   4. Fence to be topped by barbed wires.

E. Enclosure
   1. Design of the unit's enclosure must ensure an IP 43 degree of protection.

2.03 DIMENSIONS

A. Fence dimensions:

** NOTE TO SPECIFIER * Chose from the following subparagraphs in brackets, or add new ones if necessary.*

1. *[Must be 6ft x 20ft (1.8m x 6m] excluding the additional 1ft (0.3m)] of barbed wire]*
2. *[Must be 6ft x 16ft (1.8m x 5m] excluding the additional 1ft (0.3m)] of barbed wire]*
3. *[Must be 8ft x 20ft (2.4m x 6m] excluding the additional 1ft (0.3m)] of barbed wire]*
4. *[Must be 10ft x 16ft (3m x 5m] excluding the additional 1ft (0.3m)] of barbed wire]*
5. *[Must be 6ft x 24ft (1.8m x 7.4m] excluding the additional 1ft (0.3m)] of barbed wire]*
6. *[Must be 8ft x 24ft (2.4m x 7.4m] excluding the additional 1ft (0.3m)] of barbed wire]*

B. Operator dimensions:
   1. Overall dimensions of BLG77 operator:
      a. Height: 44 5/8 in (1133 mm)
      b. Footprint: 30 in x 30 in (762 mm x 762 mm)
   2. Rotation axis height:
      a. 39 3/4 in (1010 mm)

2.04 OPERATION

A. Automatic mode (arm Normally Closed & Controlled by a loop or access control device):
   1. Command to barriers. In stand-by position, the passageway must be blocked by the fence.
   2. Upon receipt of a signal from the access control system or the inductive loop, the fence must open, freeing the passageway,
   3. The obstacle immediately closes after passage or after a configurable delay.

B. Power Failure
   1. In case of power failure, the barrier can open/close manually with a special tool.
   2. After the power is restored, the unit must return to its previous operating mode.

C. Emergency Operation
   1. The unit can be set to remain open upon receiving an emergency signal. The obstacle opens and allows unobstructed exit / entrance.,
   2. This operating mode continues for as long as the emergency signal is active.
   3. After the emergency signal is off, the unit must return to its previous operating mode.

2.05 SECURITY

A. Must provide operator and fence to securely block the passageway.

B. Must have an integrated mechanical locking mechanism. The fence must be mechanically locked in the closed position to prevent any attempted break-in.

C. The cabinet's doors and cover must be locked by key.

2.06 SAFETY

A. Must provide minimum 16 ft (5 m) wide passageway.

B. Passage can be monitored in both directions by means of a loop detector, infrared beams, safety edge or other means of monitoring, to ensure user safety and prevent fence from closing when a vehicle is passing the barrier:
   1. If a presence is detected in the obstacle safety area during the opening motion, the fence will complete its opening movement.
   2. If a presence is detected in the safety area during a closing motion, the fence can be set to either immediately stop and remain in place or re-open depending on the selected mode.
   3. The obstacle will return to regular operation once the safety zone has been cleared.

C. The fence controller motor must be provided with all the entrapment protection devices as per UL325 and CAN CSA 22.2-47 requirement that will enable the gate to automatically reverse or stop the movement whenever the fence encounters an object or an individual during a closing action.

D. Must be equipped with an audible alarm that indicates that the barrier is in motion.

2.07 VEHICLE GUIDANCE

A. Visual notification with clear graphics should be installed in each direction to control flow and to warn users.

2.08 DRIVE UNIT

B. Three-phase asynchronous geared motor combined with V-belt driven gear reducer and a crank-and-rod linkages ensuring perfect mechanical locking in both extreme positions.

C. Variable-speed controller ensuring progressive accelerations and gradual decelerations, for safe movement without vibrations.

2.09 CONTROLLER

A. Microprocessor-based controller with the following characteristics:

   1. The logic must be equipped with:
      a. Digital screen to facilitate the configuration of the barrier,
      b. LED indicators showing the status of the inputs and outputs,
      c. 14 configurable digital inputs,
      d. 3 configurable output relays, 6 configurable digital outputs.
   2. The logic must be able to accommodate any loop detector with dry contact outputs.
   3. The barrier operator must be equipped with an extension module that adds 8 configurable inputs and 8 configurable output relays.
   4. The operating device must be equipped with an Ethernet connection module and an SD card to store the usage log.

2.10 POWER SUPPLY

A. Power supply:
   1. *[240/120 VAC 60 Hz]*
   2. *[208 VAC three phase 60 Hz]*

B. Nominal consumption:
   1. At rest: 50W
   2. In operation: - 659W (without heater)
      - 1109W (with 450W heater)
      - 1459W (with 800W heater)

2.11 PERFORMANCE

A. Opening Time & Closing Time:
   1. The obstacle opening time: 12 seconds.
   2. The obstacle closing time: 12 seconds.

B. MCBF: 750,000 average number of cycles between failures, when respecting manufacturer's recommended maintenance.

C. Operating Temperatures: 14 °F to 122 °F (-10 °C to 50 °C) without optional heater.

2.12 OPTIONAL EQUIPMENT

*** NOTE TO SPECIFIER ** Delete the following subparagraphs in brackets if the optional equipment is not required, or add new ones if necessary.*

1. *[Standard tip support]*
2. *[Support leg to be mounted under the obstacle]*
3. *[STOP traffic sign]*
4. *[Traffic lights fixed on a standalone post]*
5. *[Push button box]*
6. *[Key switch]*
7. *[Remote control transmitter/receiver]*
8. *[Inductive loops for car or truck detection]*
9. *[Inductive loop presence detector]*
10. *[Photocells (automatic opening, closing, safety) fixed on post or housing]*
11. *[Post for photocells]*
12. *[AS1049 board for third party traffic light]*
13. *[450/800 W heater for operation in temperatures as low as -49°F (-45°C)]*
14. *[Arm lighting]*
15. *[Raised base]*
16. *[Other RAL color available]*
17. *[Primary/Replica configuration with interlock mechanism between the 2 fences]*
18. *[208V three phase power supply]*
19. *[120V-15A Power outlet]*
20. *[Picket fence made to order]*

PART III – EXECUTION

3.01 INSPECTION

A. Installer must examine the installation location and advise the Contractor of any site conditions inconsistent with proper installation of the product. These conditions include but are not limited to the following:
   1. Rising barrier operator must be installed on a level concrete pad,
   2. Power supply and control wiring must respect the manufacturer's recommendations.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Install rising fenced barrier in strict accordance with manufacturer's instructions. Gate must be leveled and securely anchored.

3.03 ADJUSTMENT

A. Installer must adjust rising fenced barrier for proper performance after installation.

3.04 INSTRUCTION

A. A factory trained installer must demonstrate to the owner's maintenance crew the proper operation and the necessary service requirements of the equipment, including exterior maintenance.

3.05 CLEANING

A. Clean barrier operator and area carefully after installation to remove excess caulk, dirt, and labels.

3.06 MAINTENANCE

A. Maintain the equipment according to the manufacturer's instructions.

Automatic Systems reserves the right to update this document specification at any time without notice.

END OF SECTION