AUTOMATIC SYSTEMS
Access controlled...
Future secured

Tripod Turnstile

TriLane 1

Engineering Specifications

ENGINEERING SPECIFICATIONS

TriLane Waist-Height Tripod Turnstile

SECTION 11 14 00– Pedestrian Access Control Equipment (Gates/Turnstiles)

PART I – GENERAL

1.01 SECTION INCLUDES

A. This section covers the furnishing and installation of a Waist-Height Tripod Turnstile for pedestrian access control.

1.02 REFERENCES

B. The tripod turnstile shall be compliant with CSA standards.

1.03 SYSTEM REQUIREMENTS

A. The pedestrian waist-height tripod turnstile shall control and restrict pedestrian traffic between public and secure areas

B. Shall feature normally closed rotating obstacles to securely block the pedestrian's path and prevent access in restricted areas without authorization

C. Shall be manually operated, uni-directionally or bi-directionally, allowing traffic in one or both directions, configurable in one of three states:
   1. Free: all users are authorized to pass under all conditions
   2. Controlled: each user must present a valid means of authentication to the reader before being authorized to pass
   3. Locked: no one is authorized to pass, and authentication means are ignored

D. Shall be configurable in Fail-Safe (drop or fixed arms) or Fail-Secure (fixed arms) mode in case of power failure

E. Design of the unit shall be spacious enough to accommodate two (2) readers (one for each direction) and able to integrate the reader within the housing or to accommodate a surface-mounted reader

F. Shall be designed to guarantee the user safety and the ease of passage

G. Shall be suitable for outdoor installations

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. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
   4. Operation and maintenance manuals.

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

1.05 DELIVERY, STORAGE AND HANDLING

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

B. Store off of the ground, under cover, protected from weather, construction activities and debris.

1.06 PROJECT/SITE CONDITIONS

A. Install tripod turnstile on a level finished floor.

1.07 QUALITY ASSURANCE

A. Manufacturer Qualifications:
   1. Manufacturer shall be a company specialising in designing and manufacturing tripod turnstiles with a proven minimum experience of twenty (20) years
   2. Manufacturer with well-proven experience in public transport is recommended

1.08 WARRANTY

A. The manufacturer warranties this product against defects in material and workmanship for a period of two (2) years from the date of invoicing.

B. This warranty excludes normal wear on finishes or damage that occurs due to abuse or misuse.

C. Obtain full warranty terms from the manufacturer.

PART II – PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: subject to compliance with requirements, provide products by the following:
   1. AUTOMATIC SYSTEMS, 4005 Boul. Matte, Brossard, Québec, Canada
   2. Phone : 450 659-0737 or 1 800 263-6548
      Homepage : www.automatic-systems.us and www.automatic-systems.ca
      E-mail : sales.nam@automatic-systems.com

B. Products:
   1. Waist-Height Tripod Turnstile, Model TriLane

2.02 CONSTRUCTION

A. Housing
   1. Shall have a single column (TL1) cabinet
   2. To be manufactured with a removable top cover in brushed 16G (1.5) mm thick stainless steel.
   3. Front panel shall be locked by two (2) keys

B. Arms
   1. To be manufactured from brushed stainless steel
   2. Shall be 20'' [510 mm] long

C. Enclosure
   1. Design of the unit's enclosure shall ensure an IP44 level of protection

2.03 DIMENSIONS

A. Lane width:
   1. 23 21/32'' [601 mm]

B. Dimensions:
   1. Length: 15 3/4'' [400 mm]
   2. Height: 38 3/16'' [970 mm]
   3. Width: 13 3/4'' [350 mm]

2.04 OPERATION

A. The unit shall be manually operated in one or both directions

B. Normal Operation (available for the "Controlled" operating mode)
   1. In stand-by position, the passageway shall be blocked by means of a mechanically locked horizontal arm
   2. Upon receipt of an opening pulse from the access control system the mechanism shall unlock, consequently the user can manually operate the obstacle in the authorized direction
   3. The arm immediately locks after the user's passage or after a configurable time-out

C. Power Failure

With fixed arms

*** NOTE TO SPECIFIER ** Select and retain one of the following two (2) subparagraphs that is appropriate to this project.*

1. In case of power failure, the obstacle is unlocked and freely rotates to allow an easier exit (Fail-Safe). After the power supply has been restored, the unit shall return to its previous operating mode.
2. In case of power failure, the obstacle is mechanically locked in the neutral position (Fail-Lock). After the power supply has been restored, the unit shall return to its previous operating mode.

With collapsible arms

1. In case of power failure, the arms fall to provide an obstacle free passage (Fail-Safe).

D. Emergency Operation

With fixed arms

1. The unit shall have a dedicated input so as to receive the "fire alarm" signal. When the emergency signal is activated, the obstacles rotate freely in both the entry (A) and exit (B) directions. This operating mode continues as long as the emergency signal is active. After the emergency signal has been turned off, the unit returns to its previous operating mode

With collapsible arm

2. The unit shall have an input in order to receive the "fire alarm" signal. When the emergency signal is activated, the arms fall to provide an obstacle free passage

2.05 SECURITY

A. The unit shall provide three (3) sturdy steel arms to securely block the passageway and ensure single-user throughput

B. The arms shall be non-removable without appropriate tools

C. The unit shall have an integrated mechanical locking mechanism. The arms shall be mechanically blocked in the rest position to prevent any attempted break-in (only if at least one direction of passage is controlled) and to prevent two (2) passages at one time

D. The passage shall be electronically controlled and independently configurable in one or both directions:
   1. Free access
   2. Permanently locked
   3. Passage subject to authorisation

E. The unit shall feature an anti-pass back mechanism that prevents reverse rotation of the obstacle position to deter any unauthorized use and fraud in the opposite direction

F. The unit shall be equipped with a self-centering mechanism to ensure the rotating obstacles return to the reset position after passage

2.06 ERGONOMICS

A. The unit shall have three (3) arms spaced at 120° to allow comfort and ease of passage

B. These arms shall be cushioned by a hydraulic shock absorber to insure a smooth, silent and progressive movement

C. Inactive arms shall not hinder the passageway for ease of passage

2.07 PEDESTRIAN GUIDANCE

A. A visual notification with clear graphics shall be incorporated into each passageway (one for each direction) to provide status of the lane, to control flow and to warn users

2.08 CONTROLLER

A. Microprocessor-based controller with the following characteristics:
   1. Configuration via web pages
   2. 4 Digits screen
   3. RS232/485 Communication
   4. Mini USB

2.09 POWER SUPPLY

A. Power supply:

   1. 120 Volts AC 60 Hz

B. Nominal consumption in operation: 85W

C. Consumption in standby mode : 10W maximum

2.10 PERFORMANCES

A. MCBF: 5.000.000 average number mean cycles between failures, when respecting recommended maintenance

B. Operating Temperatures: -10 to +50 degrees Centigrade (+14 to +122 degrees Fahrenheit)

2.11 OPTIONAL EQUIPMENT

** * NOTE TO SPECIFIER * * Delete the following subparagraphs if no optional equipment is required, or add as necessary.*

1. *Collapsible Arm*
2. *AISI 316 stainless steel cabinet*
3. *RAL color*
4. *Heater (up to -4°F / -20°C)*
5. *Reader integration*
6. *Raised base*
7. *Ramp*
8. *Monitoring Panel (Smart'n Slim, Smart Touch, Manual Control Panel)*

PART III – EXECUTION

2.12 INSPECTION

A. The installer must inspect the installation location and advise the Contractor of any site conditions affecting the proper installation of the product. These conditions include but are not limited to the following:
   1. The tripod turnstile must be installed on a level concrete pad
   2. Power supply and control wiring must be installed. Follow the recommendations of the manufacturer.

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

2.13 INSTALLATION

A. Install the tripod turnstile in strict accordance with the manufacturer's instructions.

B. Set the unit level.

C. Anchor securely into place.

2.14 ADJUSTMENT

A. The installer shall adjust the tripod turnstile for a proper performance after installation.

2.15 INSTRUCTION

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

2.16 CLEANING

A. Clean the turnstile and the area carefully after installation to remove excess caulk, dirt and labels.

2.17 MAINTENANCE

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

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

END OF SECTION