

PRODUCT DETAIL SPECIFICATION

Section 1 Accreditation

1.01 Shallow mount fixed bollard system

1.01.1 Designation – High Security Fixed Bollard System

1.02 ASTM F2656-07 M50 / P1

1.02.1 Test Date August 31, 2012

1.02.2 Test location TRL Ltd. UK

1.02.3 Certification Rating M50 / P1

1.03 Test Vehicle

1.03.1 Make/Type International 4700 4x2

1.03.2 GVW 6800 Kg or 14,991 Lbs.

1.03.3 Speed achieved 82.9 km/h or 51.1 mph

1.03.4 Penetration .4 m or 1.3 ft.

1.03.5 Engine running after test – NO

1.03.6 Vehicle drivable after impact – NO

1.03.7 Follow on vehicle could pass barrier – NO

1.04 Product Result – Product Restrained Vehicle and was operational once reset.

1.05 Experience

1.05.1 The Manufacturer shall have at least 10 similar systems installed and in operation.

Section 2 System Configuration

2.01 Bollards

2.01.1 Minimum of a 5 bollard array for a certified product

2.01.2 Diameter equal to 12 in (307 mm)

2.01.3 Height from top of grade level to top of bollard equal to 48 in (1200 mm)

2.01.4 Spacing from bollard center to bollard center equal to 59 in (1500 mm)

2.01.5 The clear opening from bollard to bollard equal to 47 inches (1200 mm)

2.01.6 Optional Stainless Steel Sleeve Available

2.02 Foundation

2.02.1 The bollard design shall be suitable for installation on a suspended slab, structural integrity of the slab is maintained by not allowing anchor bolting of the foundation.

2.02.2 Excavation Depth equal to 8 in (203 mm)

2.02.3 Width front to back equal to 97 inches (2470 mm)

2.02.4 Length of 5 bollard array equal to 273 inches (6923 mm)

2.02.5 Concrete strength minimum of 3000 psi concrete must be used

2.02.6 Soil Compaction of not less than 95% maximum dry density

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2.03 Biscuit design

- 2.03.1 Biscuits are modular bollard design the fit together to form a pre-fabricated high security bollard system. This design facilitates a fast and easy installation
- 2.03.2 The Biscuit design eliminates the need for rebar supporting structure and eliminates the need for site hot work.
- 2.03.3 Bollard 1 counting from left to right = T shaped biscuit 8 inches in depth
- 2.03.4 Bollard 2 counting from left to right = straight biscuit 8 inches in depth
- 2.03.5 Bollard 3 counting from left to right = T shaped biscuit 8 inches in depth
- 2.03.6 Bollard 4 counting from left to right = straight biscuit 8 inches in depth
- 2.03.7 Bollard 5 counting from left to right = T shaped biscuit 8 inches in depth
- 2.03.8 Additional Biscuit designs are available to form different geometric shapes. See Below



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Section 3 Construction

3.01 Bollard Construction

- 3.01.1 The Gladiator system is constructed of heavy gauge steel fully welded prior to priming and painting (optional hot dip galvanizing)
- 3.01.2 The Gladiator Bollard includes a 16" (406 mm) top plate that is screwed to the top of the bollard.
- 3.01.3 Bollard are delivered mounted to steel biscuit structure, providing significant resistance to vehicle impact.

Section 4 Warranty

- 4.01 Warranty – the system shall carry a full 12 month parts warranty from date of delivery.

Section 5 Submittals

- 5.01 Drawings - will be provided to site specific requirements
- 5.02 Installation Manual – will be provided

Section 6 Procurement Details

The M50 / P1 Shallow Mount Gladiator product shall be purchased from
Ameristar Perimeter Security USA Inc.

1555 N. Mingo Road
Tulsa, OK 74116

www.ameristarsecurity.com