

Crash Rated Sliding Gate

Active Vehicle Barrier Specification For the SR 466:

- This specification defines as an ASTM F2656-07 M50 P1 Certified, HIGH SECURITY ACTIVE VEHICLE BARRIER SYSTEM for placement as a permanent barrier to safeguard strategic access control points and protect HIGH risk security assets, facilities and personnel.

Engineering:

- The Vehicle Barrier System (Crash Rated Sliding Gate) has been designed and CERTIFIED to meet the ASTM F2656-07 M50 P1 ANTI RAM VEHICLE BARRIER test standards.
- M50 P1 rating = 15,000 lb vehicle traveling at 50 mph stopped within 1m, absorbing 1,200,000 ft/lbs of kinetic energy.
- The Barrier is certified for gate of clear opening width of 3.9 meters.
- The SR 466 is modeled after the AR 466, which has been certified to DOD K12 L3 in a 40' clear span configuration and ASTM F2656-50 in a 16' clear span configuration

System Configuration:

- The Barrier System shall be configured in accordance with site conditions. A single BARRIER SYSTEM shall span the entire roadway which must be secured.

Construction:

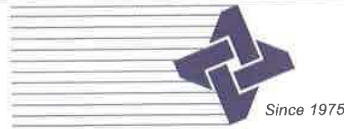
- The BARRIER SYSTEM foundation shall require an excavation depth as measured from the roadway surface. The foundation shall utilize a rebar or fiber reinforced concrete to properly anchor the BARRIER SYSTEM.
- This configuration of the SR 466 is an ACTIVE VEHICLE BARRIER which is available with several different possible gate operators including the HySecurity Slide Driver; complete with onboard controls and built in interface for virtually any amount of peripheral; including traffic lights, sirens, over speed detectors, photo eyes and ground loops.
- The barrier locking mechanism is operated automatically, with the use of a linear motion control device and interlocked with the operator.
- The BARRIER SYSTEM will function without the use of pneumatics, hydraulic pumps, cylinders, hoses or reservoirs.
- The BARRIER SYSTEM is designed to stop a vehicle attempting to gain unauthorized entry from either direction and can be installed with either side of the barrier as the main attack direction.

Performance:

- The BARRIER SYSTEM is installed in a permanent configuration, however most/all components can be re-used and re-deployed at less expense than purchasing a new system.
- The BARRIER SYSTEM is a proven design, with many installations throughout with 20 years experience in gate manufacturing and design.
- The BARRIER SYSTEM shall operate satisfactorily under the nearly any environmental conditions:
- The BARRIER SYSTEM shall be able to function in extreme temperature ranges of -45°C to 60°C regardless of humidity.
- The BARRIER SYSTEM will require only semi-annual spot inspection and requires virtually zero maintenance to keep this barrier functioning for many years.
- Maintenance to include repair of mechanical paint damage.
- Scheduled maintenance of the operator, as per the manufacturer specifications.
- Drawings and Installation Instructions. The BARRIER SYSTEM drawings, installation, maintenance and operating manuals will be sent to purchaser with each system ordered.







شركة الكحيمي للصناعات المعدنية المحدودة
Al Kuhaimi Metal Industries Ltd.

SAMPLE

Our Ref. 0032/SPD/17

23rd February, 2017.

MANUFACTURER'S COMPLIANCE CERTIFICATE
TO WHOMSOEVER IT MAY CONCERN

Client Name : M/s. Akon International Ltd.
Project Name : PetroRabigh Project
Product : Crash Rated Sliding Gate
KMI Ref # : SQ0005898

We Al Kuhaimi Metal Industries Ltd., the Manufacturer of different types of Metal Doors & Frames for Industrial, Commercial, Institutional and Security applications, hereby confirm that Anti Ram Vehicle Sliding Gate Model SR466 have been successfully tested and certified for Impact Rating of P1 at the M50 test level based on ASTM F2656-07 by our Technical Collaborators Heavy Duty Gates/KARCO Engg. Lab for gate of clear opening width of 3.9 meters.

For the gates that exceed the tested clear opening width of the Anti Ram Vehicle Sliding gate Model SR466, We confirm that the Construction of those sliding gates will be the same construction as that of the Tested and Certified Anti Ram Vehicle Sliding Gate Model SR466 and applicable for construction reinforcements if needed.

For Al Kuhaimi Metal Industries, Ltd.

Sincerely,

K. Shabeer Ahmed

Engineering Department

Structural Products Division

Noted by

Yousef Al Shanti

23/2/17
Director, SPD Division

Structural Products Division



FM:QA:030

مجموعة الكحيمي

Al Kuhaimi Group

www.alkuhaimi.com

Head Office: P.O. Box 545, Dammam 31421, Saudi Arabia
Tel.: +966-13-847 2777, Fax: +966-13-847 2591
E-mail: info@alkuhaimi.com
C.R.: 2050004686, Capital: SR. 50,000,000.00



المركز الرئيسي: ص.ب 545، الدمام 31421، المملكة العربية السعودية
هاتف: +966-13-847 2777، فاكس: +966-13-847 2591
البريد الإلكتروني: info@alkuhaimi.com
س.ت: 2050004686، رأسمال: 50,000,000 ريال سعودي

Riyadh Office: P.O. Box 17544, Riyadh 11494, Saudi Arabia, Tel.: +966-11-205 1177, Fax: +966-11-205 3434, E-mail: cb@alkuhaimi.com
Jeddah Office: P.O. Box 5248, Jeddah 21422, Saudi Arabia, Tel.: +966-12-283 0081, Fax: +966-12-283 0086, E-mail: wh@alkuhaimi.com

Heavy Duty Gates
20045 Sunset Drive
Apple Valley, CA 92308



Attention: Mr. Joel Morrison

Date: March 5, 2013

Mr. Morrison,

Based upon the test performed on Tuesday, May 18, 2010 at KARCO Engineering, LLC., the as-tested configuration of the Heavy Duty Gates SR 466 Anti-Ram Vehicle Barrier has received an impact rating of P1 at the M50 test level, based on the ASTM F 2656-07 standard test method. This test evaluated the SR 466 for an impact to center of the clear width opening.

The M50 test level of the ASTM F 2656-07 is evaluated using a 6,800 kg test vehicle traveling at a nominal velocity of 80 km/h. The P1 penetration rating is given when penetration beyond the protected side of the barrier is less than 1 meter at lower leading edge of the test vehicle's cargo bed.

The SR 466 completely disabled the test vehicle causing severe damage to the chassis, drivetrain and occupant compartment. The maximum penetration was recorded dynamically on the passenger's side of the vehicle and was -434 mm.

The SR 466 sustained severe plastic deformation as a result of the impact event. After the impact, the gate was not operable but remained blocking the opening. The locking mechanism on the right side of the gate sustained no damage and was fully operational after the test. Several rollers on the driver side foundation members were broken.

Complete information relating to the test can be found in report number TR-P30015-01-NC and CD serial number 2010-1608 from KARCO Engineering, LLC., including test conditions, test vehicle information, test article specifications, manufacturer drawings and any deviations from the drawings in the as-tested configuration. This letter should not be considered complete documentation of this test without consideration of the test report and deliverable CD.

Sincerely yours,

A handwritten signature in black ink that reads "Frank D. Richardson".

Frank D. Richardson
President
KARCO Engineering, LLC.

