PERIMETER SECURITY

Gates & Fences

Maximum protection against vehicle and pedestrian attacks

Ross' Anti-Ram Fence and Gate safeguard high-risk facilities that require complete perimeter protection against vehicle-borne attacks. Both systems provide maximum security for property borders vulnerable to high-speed impacts.

ROSS
Technology for Stronger, Safer Solutions

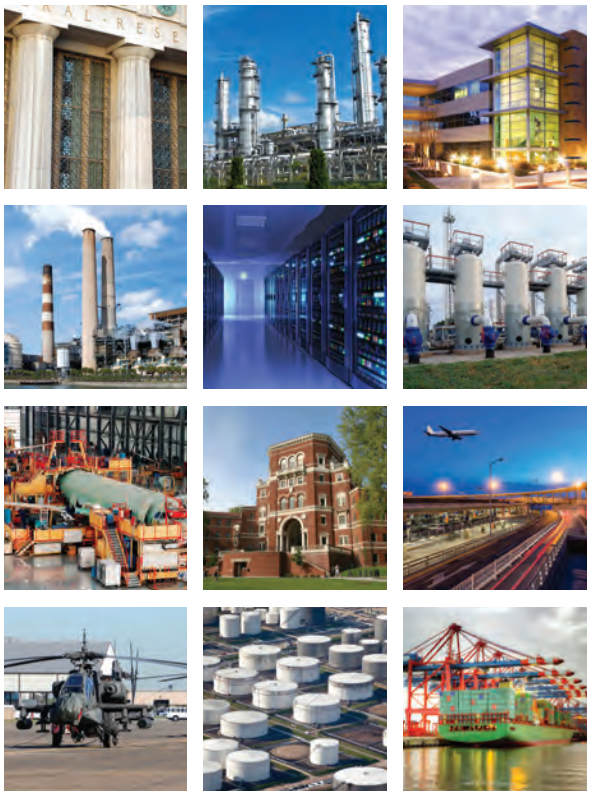
ROSS PERIMETER SECURITY

Gates & Fences

ROSS PERIMETER SECURITY

Industries

- Government
- Military
- Shipping – Ground, Sea, Air
- Critical Infrastructure
- Oil and Gas
- Mass Transportation
- Chemical/Pharmaceutical
- Banking/Financial
- Commercial
- Data Centers
- Stadiums and Arenas
- Institutional
- Industrial



Applications

Ross' **XT-4200 M50 P1 Post & Beam Anti-Ram Gate** was crash tested to the ASTM F2656-15 crash test method. With its large clear opening and above-ground electromechanical operating system, this barrier is ideal for a broad range of high-security facilities, such as airports, stadiums, data centers, power generation facilities, refineries and corporate offices.

The Ross **XL-501 / RSS-F501D M50 P1 Post & Beam Anti-Ram Fence** is an aesthetically pleasing, cost-effective perimeter fence system tested to the ASTM F2656-07 test method. It's a smart security solution for high-risk facilities such as data centers, refineries, chemical plants, utility stations, military bases, and airports.

(XT-4200) M50 P1 POST & BEAM GATE

Design Overview

The Ross Anti-Ram Gate utilizes a structural steel tube beam engineered to travel vertically between two bollard-like posts, which perpetually anchor the beam at either end. When lowered, this cross member is housed in an unobtrusive channel and shallow foundation extending across the roadway. The efficient motion of this gate design reduces the travel distance required for the barrier to open and close compared to drop-arm gates, which pivot from one end post in a long arcing motion. This feature serves to significantly decrease the cycle time required to process vehicles and eliminates potential clearance issues with overhead objects such as trees, buildings or utilities. Normal operating time is accomplished in a mere 3 – 5 seconds.

The XT-4200 is available with many equipment options for managing operation, including control consoles and safety loops. Because all of the operating components are installed above ground level, this barrier requires less maintenance than bollards and wedges and is easy to service. The Post and Beam Gate is ideal for the following conditions:

- Wide entrances - one unit is capable of securing multiple lanes of traffic or spacious checkpoints used to process large vehicles
- Seamless perimeter security – gate posts are engineered to accept Ross XL-501 Post & Beam Fence sections, eliminating gaps and redundant fence posts
- Environmental restrictions – for projects where the use of hydraulics fluids is prohibited
- High traffic – because the beam travels a short distance, this gate can process vehicles quickly
- Restrictive site conditions – where high water tables or excessive precipitation would have a negative impact on operating components installed below ground

- Excavation constraints – where underground utilities beneath the road surface limit the excavation depth
- High-speed impacts – where the roadway layout allows vehicles to reach higher speeds
- Minimal setbacks – where critical assets or equipment are located close to entrances (such as in urban areas) and a high level of security is required regardless of potential vehicle speed
- Bicycle/motorcycle access – where prevention of access for two-wheeled vehicles is desired
- Urban and corporate settings where visual appearance is an important consideration
- Sound restrictions - where noise levels are a concern

US Patent Number: 9,410,298

GCC Patent Application No. GC 2016-32289

ROSS PERIMETER SECURITY

Standard Features

- Crash tested to ASTM F2656-15 test method and assigned a rating of M50-P1 (15,000-pound vehicle traveling 50 mph with less than 1 meter penetration)
- Deployment height – 38.5" (978 mm) to top of beam
- Crash tested width – 24' (7.31 m) - other widths available
- Foundation depth- 24" (610 mm) between posts; 78" (1981 mm) at posts
- Constructed from heavy-duty structural steelsections with patented “Smart Steel” energy absorbing technology
- Dual drive system with low maintenance motor, motor brake, gearbox and chain drive system at each post
- Normal operation mode: 3 – 5 seconds
- PLC control with variable frequency motor drives
- Local panel with up/stop/down controls
- Compatible with worldwide AC power sources
- NEMA rated exterior barrier control enclosure
- Flashing lights and warning horn to indicate crash beam movement in accordance with UL-325 standards
- Rebar, provided by Ross, that is installed directly into posts. Separate rebar cages are not required
- Standard 3000 psi concrete foundation
- Drain ports
- Simple assembly of key components
- Above-grade electrical components for reliability and easy access for service
- Can be manually operated in a power outage condition

- Visual and physical integration with Ross XL 501 Post & Beam Fence
  - o Same crash rating as XL-501 (ASTM F2656 M50-P1)
  - o Fence beams slide into dedicated sections of gate posts

Optional Features

- Motor covers to match user’s architectural preferences
- Uninterrupted power supply (UPS) back-up
- Emergency operation protocol
- Wired master and remote control console (push button or touch screen)
- Pole-mounted traffic lights
- Loop detectors
- Spare parts kit
- Beam well heater
- Reflective tape
- Extended warranty

Optional Finish

- Galvanized + primed finish
- Galvanized + painted finish: Wash primer with polyurethane top coat. Contact Ross for color chart.

(XT-4200) M50 P1 POST & BEAM GATE

Technical Data

Testing and Certifications

- ASTM F2656-15 “Standard Test Method for Crash Testing of Vehicle Security Barriers”; M50-P1 rating
- Listed on DOD Anti-Ram Vehicle Barrier List

Applicable Standards

- ASTM A36: Steel Shapes
- ASTM A500: Steel Tubing
- ASTM A615: Steel Reinforcing Bar
- ASTM A307: Carbon Steel Bolts
- ASTM A563: Carbon Steel Nuts
- Structural welding in accordance with AWS D1.1/D1.1M

Installation Considerations

- End posts require 78” deep excavation; center beam trough requires 24” deep excavation
- Posts and troughs are bundled together for ease of shipment; minimal assembly required at job site

Maintenance

Regular inspection and preventative maintenance is required.

Quality Control

Manufacturing facility certified to ISO 9001:2015.

Availability and Cost

Gate systems are typically made to order and subject to production lead times at the time of purchase. Standard products may be available with shorter lead times. Contact Ross for details.

Warranty

Ross warrants that all of its manufactured products shall remain free of defects in material and workmanship under normal use for a period of one year from the date of delivery.

(XL-501/RSS-F501D) M50 P1 POST & BEAM FENCE

Design Overview

The XL-501 Post and Beam Anti-Ram Fence was engineered to be extremely simple and efficient in terms of the materials required to arrest vehicle impact and the effort required for construction. In fact, each fence section is made up of only six standard components – (1) nut and bolt assembly, (2) posts, (1) top cap, (10) rebar sticks and shim plates (as needed).

Constructed from heavy-duty structural steel, this unique system utilizes a single tubular beam with patented, energy-absorbing technology that enables the vertical posts to be set on 30-foot centers. This design feature eliminates the need for multiple intermediate posts and cable runs used in traditional anti-ram fence products.

The top cap secures the horizontal crash beam and protects the post from the elements. It is secured with a single nut and bolt. The rebar (supplied by Ross) is installed directly into posts; separate rebar cages are not required.

Ross Post and Beam Anti-Ram Fence accommodates a wide range of inherent site considerations, including layout and terrain changes. The heavy-duty galvanizing and optional epoxy primer and polyurethane topcoat provide a high-quality, durable finish that withstands the elements. And the high-strength tubing does not require initial or ongoing tensioning. Because it offers so much flexibility, this anti-ram fence is ideal for a variety of conditions such as:

- High-threat facilities – where the entire perimeter necessitates anti-ram defense
- Access control points – alongside vehicle barriers to increase the level of protection for adjacent areas that are also vulnerable to vehicle impact
- Perimeters with minimal setbacks – where immediate stopping power is critical
- Urban and corporate settings – where visual appeal is an important consideration
- A stand-alone barrier – around an entire perimeter
- Upgrades for existing fencing – chain link, ornamental and other natural barriers can easily be upgraded to meet higher threat requirements

US Patent Numbers: 9,347,191 and 9,435,088

GCC Patent Number: GC0009445

(XL-501/RSS-F501D) M50 P1 POST & BEAM FENCE

Standard Features

- Crash tested to ASTM F2656-07 test method and assigned a rating of M50-P1 (15,000-pound vehicle traveling 50 mph with less than 1 meter penetration)
- Post spacing – 30' (9.14 m)
- Beam height – 38.5" (978 mm)
- Post height – 42.63" (1083 mm)
- Foundation – 36" (914 mm) diameter x 78" (1981 mm) deep
- Constructed from heavy-duty structural steel sections with patented “Smart Steel” energy-absorbing technology
- Top cap secures beam and protects system from the elements. Secured with a single nut and bolt
- Rebar, provided by Ross, that is installed directly into posts. Separate rebar cages are not required

Optional Features

- Post filler plates for end-of-run conditions
- Custom beam lengths
- Custom end conditions

Optional Finish

- Galvanized + epoxy primer and polyurethane topcoat. Contact Ross for a color chart

PERIMETER SECURITY

Technical Data

Testing and Certifications

- ASTM F2656-07 M50-P1 rating (15,000 lb. truck @ 50 mph with less than 1 m penetration) for standard section
- Listed on DOD Anti-Ram Vehicle Barrier List

Applicable Standards

- ASTM A36: Steel Shapes
- ASTM A500: Steel Tubing
- ASTM A615: Steel Reinforcing Bar
- ASTM A307: Carbon Steel Bolts
- ASTM A563: Carbon Steel Nuts
- Structural welding in accordance with AWS D1.1/D1.1M

Installation Considerations

Installation requires excavation of holes using an auger and placement of posts in concrete (3000 psi [20.7 Mpa] min, 28-day strength). Rebar, which is provided by Ross, is installed into the fence posts, eliminating separate rebar cages. The horizontal beams can be set with a backhoe, digger derrick truck, excavator, skid loader or boom truck. A single nut and bolt, which can be peened or welded for additional security, fastens the top cap to the post. For information on corner conditions, significant changes in elevation and non-standard beam lengths, contact Ross for details.

Maintenance

Ross's XL-501 Post and Beam Anti-Ram Fence is maintenance-free, constructed with high-strength materials that do not require tensioning and come in high-quality, durable finishes that withstand the elements.

Quality Control

Manufacturing facility certified to ISO 9001:2015.

Availability and Cost

Fence systems are typically made to order and subject to production lead times at the time of purchase. Contact Ross for details.

Warranty

Ross warrants that all of its manufactured products shall remain free of defects in material and workmanship under normal use for a period of one year from the date of delivery.

ROSS PERIMETER SECURITY

Anti-Ram Vehicle Barriers & Fencing

Ross Technology Company
104 North Maple Avenue
Leola, PA 17540-0646
US: 800-345-8170
International: +01(717)656-2200
Fax: 717-656-3281
Email: sales@rosstechnology.com
RossTechnology.com