

# HIGH SECURITY





## Barrier Lift System

BLS Defence – massive Horizontal Lifting Barrier with a secure break through prevention  
– Certified DOS K12 & PAS 68:2007

The range High Security consists of various systems/products. Within the High Security range the crash rated elkosta BLS Defence Barrier (barrier lift system), offers maximum security for highly sensitive entry or exit points against unauthorized vehicles attempting to break through by destroying the chassis completely.

Typical areas of application are: banks, detention centers, power stations, industrial plants, military plants, airports and other high security zones.

# Barrier Lift System

## Application examples and function of the barrier lifting system

The elkosta BLS Defence Barrier can be used individually or in combination with other elkosta products (e.g. elkosta Road Blockers DSP® K12, tyre killers, barriers, crash gates, bollards), in order to achieve a sluice arrangement forming a vehicle check point. The reinforced steel beam raises out of the tarmac and closes the roads entire width. The elkosta BLS Defence Barrier starts protecting after 1 second. Due to the warning colour the elkosta BLS Defence Barrier is clearly visible. The boom raises very quickly to the upper position and blocks the road with variable heights up to max. 1100 mm (center boom). In the lowered position the elkosta BLS Defence Barrier is completely unobtrusive and flush with the road surface. It corresponds to bridge class 60, so that also heaviest vehicles can use the secured entry.



## Advantages of the elkosta BLS Defence Barrier

- Short operating time. Protection starts immediately.
- Boom in warning colour.
- Blocking height 1100 mm.
- Clear width: up to 9 m.
- Stable construction, all basic parts consist of steel with high tensile strength.
- Low maintenance costs
- Easy service due to the separate drive cabinet.
- Tri Protect Long-Term Corrosion Protection
- Installation in all climate zones possible
- All vehicles can drive over it, due to adherence to bridge class 60
- Emergency function by a hand pump or an accumulator (option)



## Truck Crash test

Gunnebo's BLS Defence Barriers fulfil the highest safety level. Heavy vehicles with high speeds are stopped reliably.

## “Everything from one source”

“Everything from one source” is our principle. Planning, manufacturing, installation and maintenance is our competence. Gunnebo stands at your side as a strong and experienced partner.



We reserve the right to alter product information without any obligation.

# elkosta Bollards

High security with blocking effect



The Gunnebo Group offers a wide range of solutions for entries, where pedestrians may enter unhindered but vehicle traffic is to be stopped. Due to their attractive

designs the bollards can be used in inner city surroundings for city security and traffic management. Applications can range from temporary closing of city centres, but still allowing vehicles with permission to pass,

to real estate properties with high security needs. Gunnebo products are widely used for military sites, governmental buildings, embassies, banks and city centres.

# elkosta Bollards

## High Security with blocking effect

Crash bollards share a rigid steel tube as blocking element and are available in different sizes. The lowered bollards adhere to bridge class 60, so even the heaviest wheeled vehicles can drive over them safely. All movable bollards are equipped with an integrated hydraulic drive. The advantages of this drive technology are maximum power transmission and working reliability under most adverse weather conditions. During power failure the bollards can be lowered manually. The blocking width can be varied by the number of bollards in a row. Up to five bollards can be operated with one common control unit.

### Advantages of the elkosta bollard

- Short operating time
- Variable blocking width
- Operation of up to five bollards with one common control unit
- Stable construction, all basic parts made of steel with high tensile strength
- Easy assembly complete with guide rails and integrated drive unit
- Single phase power supply
- Shallow foundation
- Emergency Fast Operation (EFO)

#### Features

- Low maintenance costs
- Installation in all climate zones possible
- Manual emergency lowering of the blocking element during power failure

elkosta Bollards	15000lbs	
	30mph	50mph
Automatic	Crash test ASTM F 2656-07 M30 - P1	Crash test ASTM F 2656-07 M50 - P2
Fixed shallow mounted	Vehicle impact simulation M30 - P1 (Triple unit)	Crash test ASTM F 2656-07 M50 - P1 (Triple unit)



# elkosta Road Blocker DSP® K12

Optimal security solution for highly sensitive entry points



elkosta Road Blockers DSP® K12 offer maximum security against unauthorized vehicles of all sizes and weights for highly sensitive entry points. Typical areas of application are: embassies, government seats, courts, banks,

penitentiaries, power stations, military sites and airports. elkosta Road Blockers DSP® K12 are designed to guarantee the full level of security. They were successfully crash tested according to DOS SD-STD-02.01 Rev. A 03/2003 and

PAS68 with a 7.5 ton truck travelling at 80 km/h. The very first impact test was conducted by the TÜV (German Technical Inspectorate) more than 25 years ago.



## elkosta Road Blocker DSP® K12 - Optimal security solution for highly sensitive entry points

### Application type and function

The elkosta Road Blockers DSP® K12 can be installed as single unit or in combination with other products (e.g. barriers, gates, tyre killers or bollards) to form a sluice for vehicle check points. In operation the heavy blocking segment raises in approximately 5 seconds and blocks the road with a height of 1000 mm. The blocking

segment is clearly visible due to the flashing lights and optional warning stripes thus ensuring the stopping of approaching vehicles in good times. In the lowered position the road blocker is absolutely unobtrusive, flush with the road surface and capable of supporting wheeled vehicles with a load bearing capacity up to

bridge class 60. The raising time can be reduced to approximately 2 seconds using an optional accumulator for Emergency Fast Operation (EFO).

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### Advantages of the Road Blocker DSP® K12

- Fast operating times (2-5 seconds)
- Blocking segment with flashing lights
- All parts made from high tensile steel
- Easy and cost effective installation, due to ready-to-install underground unit and separate drive cabinet
- Long-term corrosion protection
- Low maintenance
- Installation in all climate zones possible
- All vehicles can drive over the lowered road blocker
- Emergency operation during power failure by hand pump or accumulator (optional)
- Certified according to DOS K12/L3 and PAS 68 V/7500[N3]/80/90:0.0/18.0



# elkosta Tracked Gate M50

Sliding gate designed to stop all threats

- certified ASTM F2656 - 07 M50/P1



The unique design of the Tracked Gate M50 affords impact protection and is therefore ideal for all critical infrastructure applications ranging from correctional facilities,

critical defence sites, courts, airports, refineries, embassies and many other designated high risk areas. The gate boasts a tracked design with unrivalled reliability and high speed

opening and closing times that are impossible to achieve with other drive principles.





## elkosta Tracked Gate M50 Sliding gate designed to stop all threats

The Tracked Gate M50 can be adapted in height and fitted with anti-climbing devices to comply with site-specific requirements. It can be utilised as anti vehicle barrier. The Tracked Gate M50 has been the subject of rigorous design appraisal and testing regimes by Government agencies in the United

States. It has been successfully crash tested according to ASTM F2656-07 and PAS 68. The Tracked Gate M50 system is fully compatible with all access control systems and its advanced design and technology combined with its application flexibility, provides a total solution for all perimeter security

access points vulnerable to hostile vehicle attacks.

We reserve the right to alter product information without any obligation.

### Advantages of the elkosta Tracked Gate M50

Up to 7000mm clear widths

Up to 3000mm height

Shallow foundation 400mm deep

Top edge foundation 100 mm below finished floor level

Certifications: ASTM F2656-07 M50/P1

PAS 68 V/7500[N3]/80/90:00/4.3 (tested with 7 m clear opening width)



# elkosta Wedge Barrier K12 with optional skirt

Optimal security solution for highly sensitive entry points



Wedge Barriers offer maximum security against unauthorized wheeled vehicles of all sizes and weights for highly sensitive entry points. Typical areas of application are embassies, government seats, research and development centres, power stations,

industrial plants, military sites, airports and other high security areas.

**Application type and function**  
The Wedge Barrier K12 is designed to guarantee the full level of security and it can be installed as a single unit or

in combination with other products (eg. barriers, gates, tyre killer or bollards) in order to realise a sluice arrangement forming a vehicle check point.



## elkosta Wedge Barrier K12

operation the blocking segment will raise (automatically or via controller) and block the entrance within 3 second or 1 second with the optional emergency fast operation (via accumulator). Due to the optional warning plate with flashing lights and its eye catching warning colour(s) the blocking segment is clearly

visible to approaching vehicles. In the lowered position the Wedge Barrier is absolutely unobtrusive and flush with the road surface. It is available in blocking widths of 2 to 4 meter and has a blocking height of 1200 mm. The Wedge barrier is predestined to be installed in inner cities where deep foundations

are not possible due to its shallow foundation of only 400 mm. A closed wedge barrier version with safety skirt at a reduced height of 1000 mm is also available.

We reserve the right to alter product information without any obligation.

### Advantages of the elkosta Wedge Barrier K12

- Designed for an impact rate of 1852 kJ (7,5t @80km/h)
- Extremely fast operation (approx 1 sec EFO option)
- Shallow foundation (400 mm)
- Blocking segment with optional warning plate with flashing lights
- Rigid construction to withstand highest impact loads
- Easy and fast installation
- Delivery as a ready-to-install unit
- Long term corrosion protection
- Low maintenance
- Installation in all climate zones possible
- Designed for high wheel load, heavy vehicles can pass the lowered wedge
- Emergency operation during power failure via hand pump or accumulator (optional)
- Certifications: DOS SD - STD - 02.01. Rev. A 03/2003 K12/L3
- PAS 68: V/7500[N3]/80/90:0.0/18.0 (tested with 4 m blocking width)
- PAS 68: D/7500/80/90/1852 (wedge with safety skirt)

# elkosta Tyre Killer

Massive sharp spikes with guaranteed stopping effect



Our full range of Anti-Terror/ High Security products includes tyre killers, road blockers, bollards, barrier lift systems and sliding gates. Within this range the elkosta Tyre Killer offers a high degree of protection against unauthorized entry or exit of hostile motor vehicles. If a vehicle attempts to break through, its tyres and axles will be destroyed and further progress will certainly be prevented.

Typical areas of application are: embassies, industrial plants, power stations, parking lots, car parks, airports, military sites and private properties.



## Tyre Killer - Massive sharp spikes with guaranteed stopping effect

### Options

- Different control options are available, such as:
- Push-button actuator
- Code switch
- Magnet/code card reader
- Remote control
- Induction loops
- Photo beams
- Electronic vehicle identification systems
- Contact free reader systems
- Crash PAD (a switch at the boom barrier) when a vehicle tries to ram the boom barrier the elkosta Tyre Killer automatically is raised into blocking position thus ensuring a secure entrance.

### Features

- Short operating times
- Spikes in warning colour
- All basic parts made from high tensile steel
- Easy installation due to ready-to-install blocking unit and separate drive cabinet
- Long - term corrosion protection
- Low maintenance
- Installation in all climate zones possible
- All vehicles can drive over the lowered Tyre Killer
- Emergency operation during-power failure by hand pump or accumulator (optional)

### Application type and function

elkosta Tyre Killers can be used individually or in combination with other Perimeter Protection Group products (e.g. road blockers, boom barriers, gates or bollards) to form a sluice for vehicles. The solid sharp spikes will raise in approximately 2 seconds and block the road with a height of 450 mm. The spikes are clearly visible thanks to garish

warning colours thus ensuring the stopping of approaching vehicles in good time. In its lowered position the elkosta Tyre Killer is completely unobtrusive, flush with the road surface and capable of supporting wheeled vehicles with a load bearing capacity up to bridge class 60. The "plug and play" elkosta Tyre Killer is characterised by a shallow

installation depth which makes it particularly suitable for locations with limited available depth due to underground utilities.

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## elkosta Wedge II

State of art foundations designed to stop all threats

- certified PAS 68:2013 and IWA 14-1:2013



elkosta Wedge Barriers offer maximum security against unauthorized wheeled vehicles of all sizes and weights for highly sensitive entry points. The elkosta Wedge II is designed to guarantee the full level of security. Typical areas of application are

embassies, government seats, research and development centres, power stations, industrial plants, military sites, airports and other high security areas. It can be installed as a single unit or in combination with other products (e.g. barriers, gates, tyre killers

or bollards) in order to realise a sluice arrangement forming a vehicle check point. The Wedge II is also suitable for installation in city centres due to its shallow foundation depth of only 300 mm.



## elkosta Wedge II - state of art foundations

The new elkosta Wedge II was successfully tested to PAS 68:2013 and IWA 14-1:2013 standard stopping a 7.5 t vehicle travelling at 80 km/h with ZERO penetration. With its decreased installation depth and foundation footprint combined with the lowest foundation thickness in the world, the new Wedge II reduces installation costs significantly and allows installation in areas where

foundation depths are limited due to underground utilities. Compared to the previous model, the Wedge II features many technically innovative details, like state of art foundation and reinforcement. It offers high energy efficiency due to employment of pressure spring pistons. Starting power and lifting power for raising of blocking element due to energy stored in pressure springs have

been optimised as well. Further improvements are the scale-downed versions of accumulator for EFO and RO3 function. The Wedge II effectively blocks the road within 3 sec., decreasing to 1 sec. (via optional accumulator). The working oil volume was reduced due to use of a single hydraulic cylinder. This means lower costs for higher security.

### Advantages of the elkosta Wedge II

- Certified with a blocking width of 4 m according to PAS 68:2013 and IWA 14-1:2013 achieving the following performance classifications:
  - PAS 68:2013 V/7500[N3]/80/90:0.0/20.7
  - IWA 14-1:2013 V/7200[N3C]/80/90:0.0
- Extremely fast operation (approx 1 sec EFO option)
- State of art foundation and reinforcement
- Only 300 mm installation depth (200 mm foundation thickness + 100 mm below road covering)
- With or without safety skirt - one version for all requirements
- Reduced working oil volume due to single hydraulic cylinder
- Scale-downed versions of accumulator for EFO and RO3 function
- Compact and easy to install assembly unit
- Easy assembly for effortless maintenance
- LEDs available as optional extra





The Gunnebo Security Group provides efficient and innovative security solutions to customers around the globe. It employs 5 700 people in 32 countries across Europe, Asia, Africa, Australia and North America, and has a turnover in excess of €650m. Gunnebo focuses its offering on Bank Security & Cash Handling, Secure Storage, Entrance Control and Services.

We make your world safer.

High security solutions from Gunnebo are marketed and sold under the following brands:

**GUNNEBO**<sup>®</sup>

**ALLTECH**  
by **GUNNEBO**

**elkosta**<sup>®</sup>

**PERIMETER  
PROTECTION**

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*For a safer world*