Designers and Manufacturers of

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01 Energy Absorbing Bollards
02 Decorative Bollards
03 Additional Energy Absorbing Products
The EAB is manufactured with high grade carbon steel thick walled hollow bar 150mm in diameter, 1450mm long which is inserted 800mm deep into a foamed cartridge.

Available in galvanized, standard 2-pack painted finish and 304 satin stainless steel. Standard colours includes but not limited to black, yellow, heritage green and red.

Correct installation of the EAB is critical for their performance under impact conditions. All installers of EAB’s MUST confirm in writing that they have followed the manufacturer’s “Installation Instructions” for EAB’s.

<table>
<thead>
<tr>
<th></th>
<th>Carbon Steel Hollow Bar</th>
<th>Cartridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter (mm)</td>
<td>150 Ø</td>
<td>355 Ø Top 168 Ø Body</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>1450</td>
<td>800</td>
</tr>
<tr>
<td>Weight (kgs)</td>
<td>67.5</td>
<td>28.5</td>
</tr>
<tr>
<td>Speed Rating (km/h)</td>
<td></td>
<td>60kph</td>
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</table>
Energy Absorbing Bollards are non-redirective crash attenuators designed to protect vulnerable pedestrians from out of control vehicles.

Televised actual crash testing of Energy Absorbing Bollards
Energy Absorbing Bollard 20kph

Our Bollard range for parking facilities. The EAB20’s are also non-redirective crash attenuators, designed to arrest a 1.6 ton errant vehicle travelling at car park speed of 20kph. Commonly used for parking facilities and very slow traffic areas.

Ultimate Control and Protection for Parking Facilities

Typical non compliant bollards are surface mounted or buried 200-300mm below the ground and frequently with no concrete or steel reinforcement. This will make them incapable to stop vehicles even at speeds of 5-10kph. They can also be dangerous when impacted by an out-of-control vehicle as they become flying projectiles and possibly injure pedestrians.
Retractable Energy Absorbing Bollards- Hydraulic (EAB-RH). These bollards incorporate all safety features of the EAB with additional retraction and extension capabilities. They have the ability to be controlled in a number of variations and could be integrated to your existing building controllers and systems. The EAB-RH is a world class product made and designed in South Australia.

**Dimensions**

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Retractable Gas Strut

EAB-GS
Manually Retractable Energy Absorbing Bollards (EAB-GS).

This series of bollards are:

- Cost Effective
- Low Maintenance
- Energy Absorbing
- Life-saving

All of the attributes that the EABs have in a cost effective, manually retractable implementation. They can be locked and unlocked with a specifically designed security key and require minimal maintenance.
Our Tested High Security Bollards Series.

Three products that have the capability to stop a 7.5 Ton Heavy Goods Vehicle (HGV), travelling at 48kph while safely decelerating the truck saving its occupants and the pedestrians alike. Tested within the PAS-68 test parameters, the EAB-HS is not one to mess with. Perfect for high security buildings and assets, this bollards range will stop a potential terrorist act before they can inflict damage or harm.

Able to stop a 7.5 Ton vehicle (HGV) moving at 48kph
02
Decorative Bollards
Stainless Steel Semi—Automatic Bollards

Semi-Automatic Bollard can be extended and retracted manually using a security key. No power source required adds greatly to its advantage. The 304 Stainless Steel body will give them exceptionally long life. Low maintenance and a very reliable bollard series.

Specifications

- Bollard Material: 304 Stainless Steel
- Bollard Diameter: 168mm Ø & 219mm Ø
- Bollard Height: 600mm
- Bollard Thickness: 4mm
- Bollard Finish: Satin Finish
- Hole Depth: 270mm Ø x 700mm D

Operation

1. Insert Key and turn
2. Bollard will extend on its own
3. Bollard will lock in place
4. Insert Key and turn
5. Push the bollard down with hand
6. Bollard will lock itself once it reaches the bottom limit
Retractable Bollards have become an everyday sight in today's metropolitan cities. More local councils and government agencies are choosing bollards to separate the pedestrians from out of control vehicles.
**Stainless Steel Full Automatic Bollards**

**Specifications**
- **Bollard Material:** 304 Stainless Steel
- **Bollard Diameter:** 168mm Ø & 219mmØ
- **Bollard Height:** 600mm
- **Bollard Thickness:** 4mm
- **Bollard Finish:** Satin Finish
- **Hole Depth:** 270mm Ø x 700mm

**Fully-Automatic Hydraulic Bollards** are designed to be extended and retracted by a push of a button. A range of options for control from a conventional manual switch to a convenient mobile phone app. Can be easily programmed to suit a desired custom function.

**Options for Control**
- Mobile App
- Control Switch
- Desktop & Web App
- Tap Card System

Integrable with existing system
Expert EAB Installation
Enhances the scene!
Generates a feeling of safety to the community
A range of fully customised 304 Stainless Steel Bollards with a range of sizes and heights to customer’s specifications and requirements. Including 316L stainless steel material for corrosion high risk areas.

**Features**
- A range of Bollard Tops
- Different Cylinder Sizes
- 2 Base / Flange Designs
- Reflective Tape
- Custom Logo / Design Engraving
- Satin, Mirror or Gold Plated Finish

**Bollard Top Options**
- Dome Head
- Slanted Head
- Flat Top
## Bollard Dimensions Chart

### Thickness (mm)

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<th>Diameter (mm)</th>
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Additional Features

Custom Engraved Logos & Machined Grooves

Customers can choose to engrave their own logo or add a municipal emblem on the bollards. Other decorative options are also available.

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Additional Energy Absorbing Product Range
- Complies to test criteria AS/NZS:1999—Non re-directive crash attenuator
- Designed to arrest a 1600kg errant motor vehicle travelling at speeds up to **60 kph**
- Deforming—Energy Absorbing Bollard protects the vehicle occupants
- Ideal for non-gating & limited space applications
- EAET is easily replaced after impact and can be retro-fitted to existing end terminals.
- Anchored End Terminal facilitates downstream quadrail to re-direct impacting vehicles.
Energy Absorbing Crash Cushions

The Energy Absorbing Crash Cushion (Pole/Tree Buffer) is used to protect vehicle occupants in the event of a collision with fixed roadside objects including trees, light poles, concrete walls, bridge rails, and power poles. Strategically slotted steel tubes provide controlled crumpling and energy absorption to an errant vehicle during impact safely decelerating the vehicle reducing injury potential for the occupants.
Energy Absorbing Street Light Poles

The most common light pole in use is a slip based light pole. This type of light pole disconnects from the base during a collision. Typically, this type of light pole is applied to outer metropolitan areas, with no pedestrian traffic.

EASLP is designed to wrap around the errant motor vehicle safely decelerating the vehicle until it fully stops; while keeping the light pole vertical and preventing it to fall on the pedestrians or impact other road users.

EASLP test photo. A car travelling at 60kph has been arrested by the Energy Absorbing Light Pole and is supporting the EASLP against the vehicle.
For additional information please contact:

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