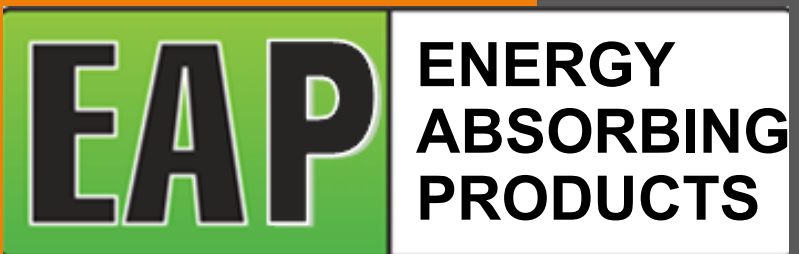




Designers and Manufacturers of



Impact Absorbing Systems Pty Ltd

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01

Energy Absorbing Bollards

02

Decorative Bollards

03

Additional Energy Absorbing Products



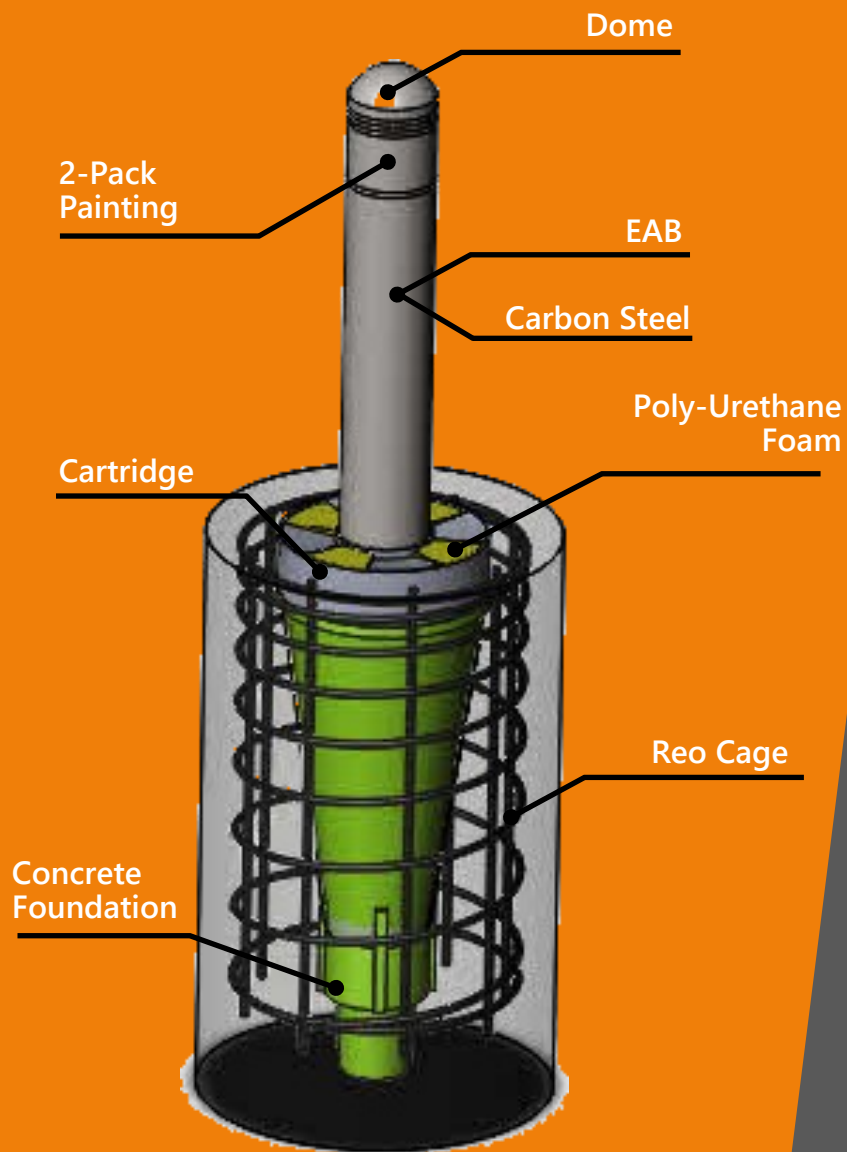
The background of the slide is divided diagonally from the top-left to the bottom-right. The upper-left portion is white, and the lower-right portion is a solid orange color. Two parallel white diagonal lines run across the orange section, creating a sense of motion or a stylized 'Z' shape.

01

Energy Absorbing Products

EAB

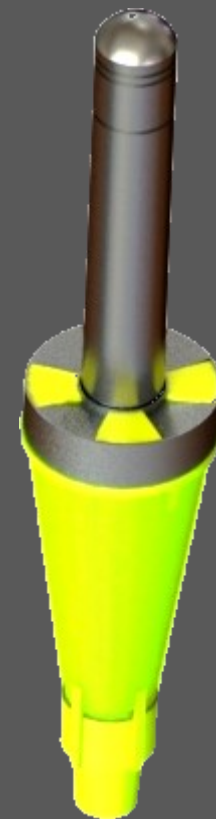
ENERGY ABSORBING BOLLARDS



1 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.

2 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

3 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.



	Carbon Steel Hollow Bar	Cartridge
Diameter (mm)	150 Ø	355 Ø Top 168 Ø Body
Length (mm)	1450	800
Weight (kgs)	67.5	28.5
Speed Rating (km/h)	60kph	

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



EAB ENERGY ABSORBING BOLLARDS



Dome

2-Pack
Painting

EAB

Carbon Steel

750mPa

Cartridge

Concrete
Foundation

Energy Absorbing Bollard 20kph

Our Bollard range for parking facilities. The EAB20 .

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.



Controller Options

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

	Carbon Steel Hollow Bar	Cartridge
Diameter (mm)	150 Ø	355 Ø Top 168 Ø Body
Length (mm)	1450	1700
Weight (kgs)	67.5	28.5
Speed Rating (km/h)	60kph	

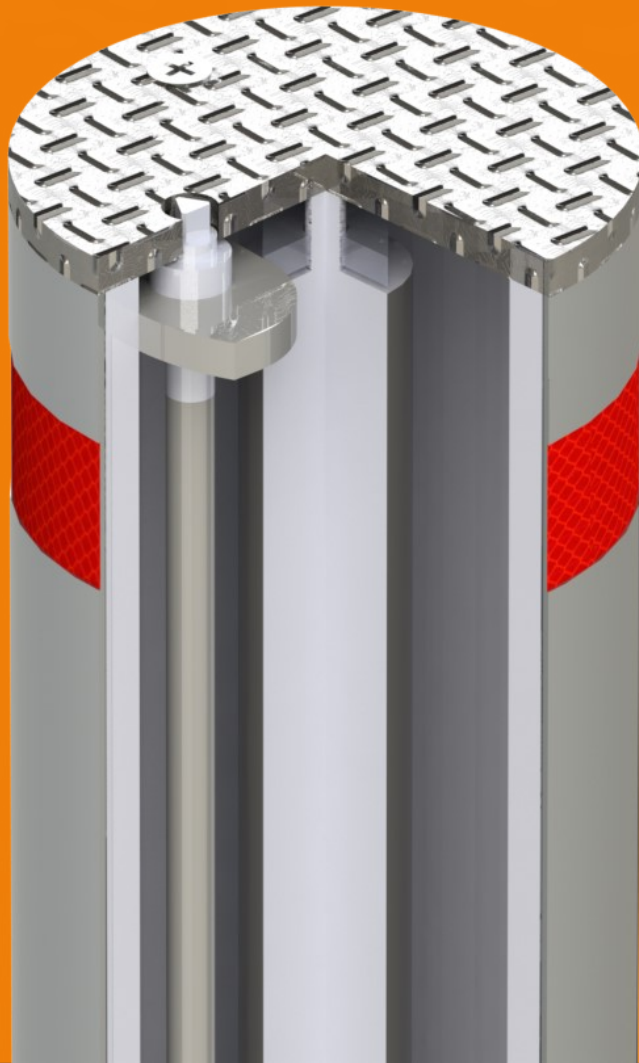


Retractable Hydraulic

EAB

ENERGY ABSORBING BOLLARDS

Retractable Gas Strut



	Carbon Steel Hollow Bar	Cartridge
Diameter (mm)	150 Ø	355 Ø Top 168 Ø Body
Length (mm)	1450	1600
Weight (kgs)	67.5	28.5
Speed Rating (km/h)	60kph	



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.

EAB

ENERGY
ABSORBING
BOLLARDS

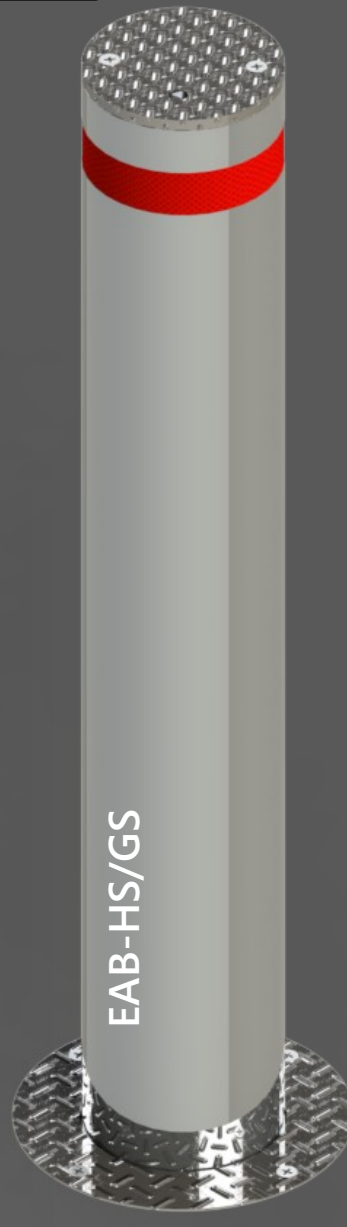
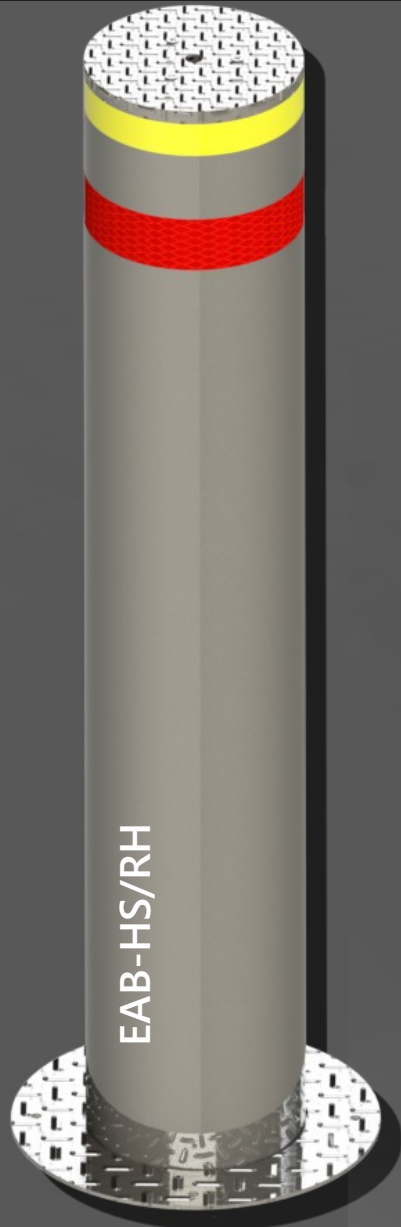
HS

High Security Series

PAS 68 Compliant

Able to stop a 7.5
Ton vehicle (HGV)
moving at 48kph

Our Tested High Security Bollards Series. Three products that have the capability to stop a 7.5Ton 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.



High Security Series Truck Stopper



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 it's advantage. The 304 Stainless Steel body will give them exceptionally long life. Low maintenance and a very reliable bollard series.

Operation



1. Insert Key and turn



2. Bollard will extend on it's 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

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

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



Bollards

Stainless Steel Full Automatic Bollards



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.

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

Options for Control



Mobile App



Control Switch



Integrable with
existing system

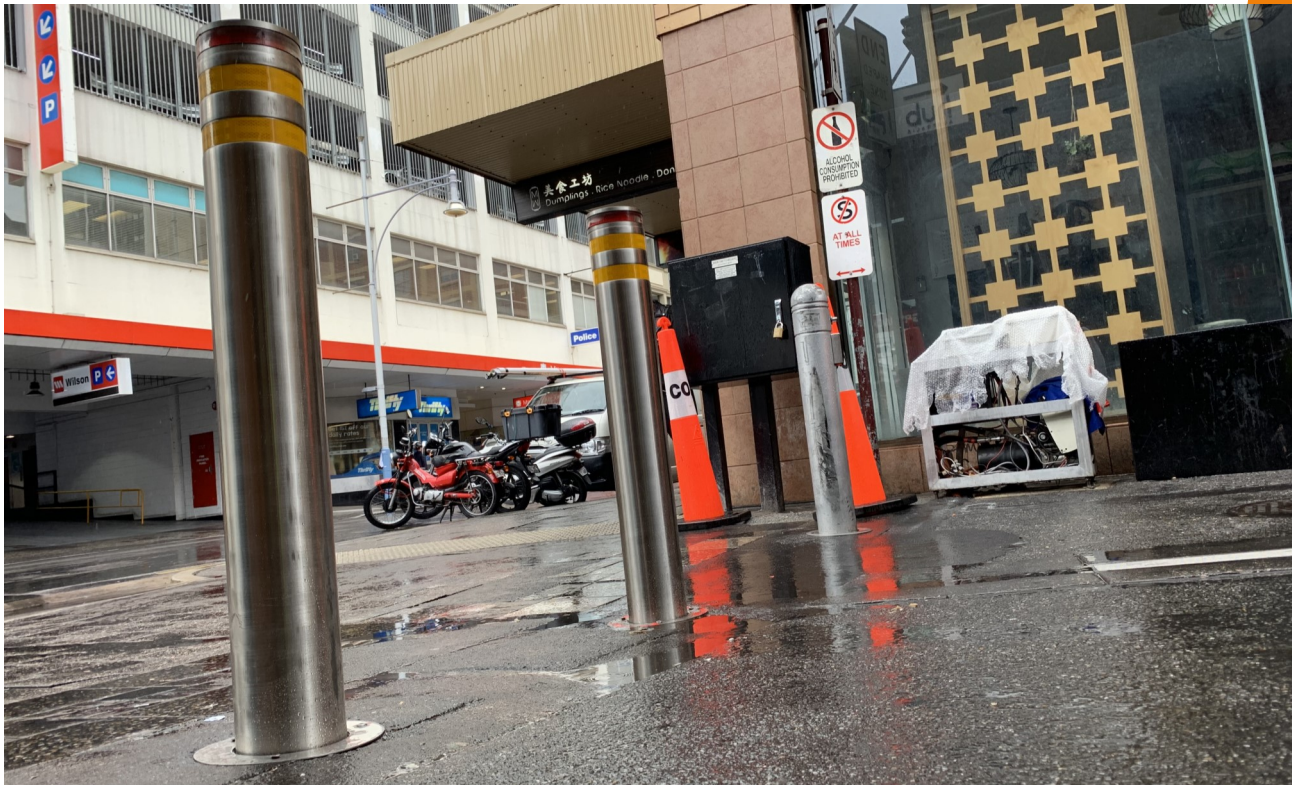


Desktop &
Web App



Tap Card System





Expert EAB Installation

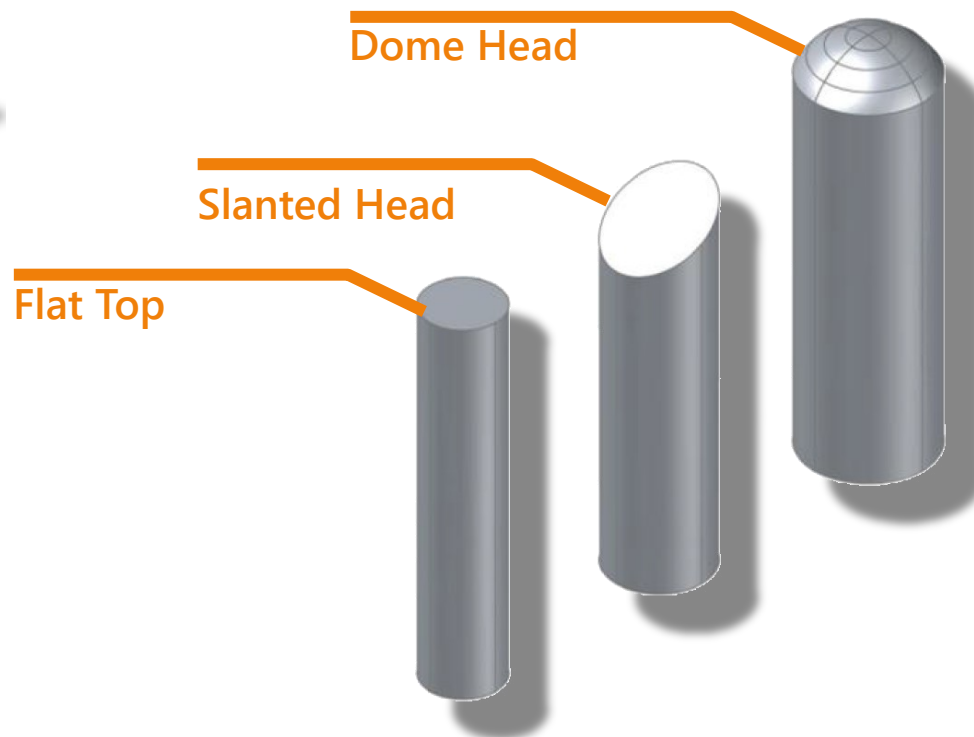
Enhances the scene!
Generates a feeling of safety to
the community

Decorative Bollards Series



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.

Bollard Top Options



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 Dimensions Chart

		Thickness (mm)					Height 600 ~ 1500mm
		2.0	3.0	4.0	5.0	7.0	8.0
Diameter (mm)	76	■	■	■			
	89	■	■	■	■		
	102	■	■	■	■	■	
	114		■	■	■	■	■
	141		■	■	■	■	■
	159		■	■	■	■	■
	168		■	■	■	■	■
	219		■	■	■	■	■
	273		■	■	■	■	■
	324		■	■	■	■	■

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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03

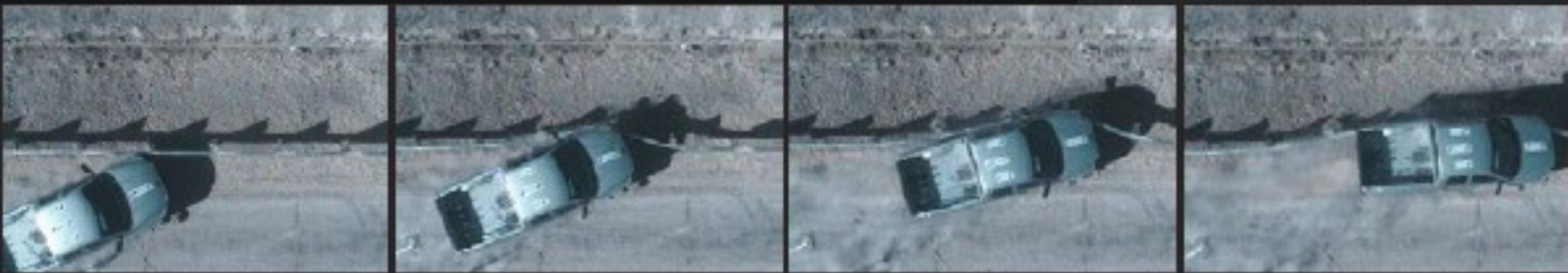
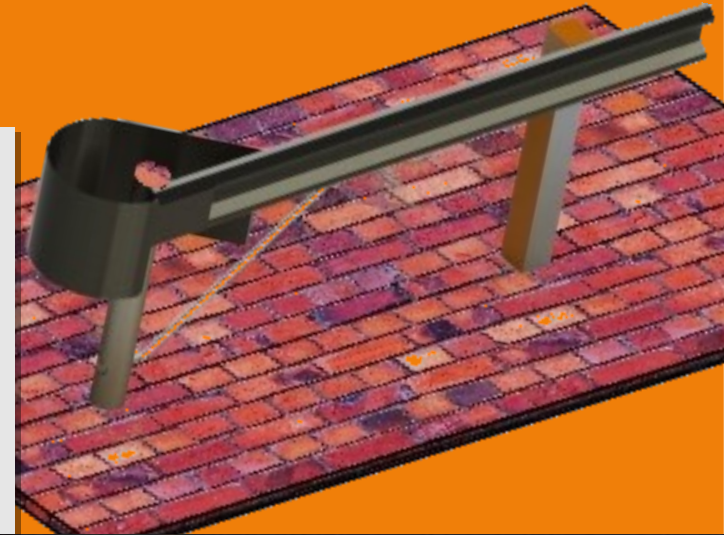
*Additional Energy Absorbing
Product Range*

Energy Absorbing End Terminal EAET

EAET

ENERGY
ABSORBING
END TERMINALS

- 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



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.

Energy Absorbing Street Light Poles



For additional information
please contact:



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