



## THE ULTIMATE CARPARK BOLLARD

### BOLLARDS REUSABLE

Bollards are removable and reusable even following severe impact

### FOUNDATIONS REUSABLE

Zero damage to expensive footings even following severe impact

**“The time is past when humankind thought it could selfishly draw on exhaustible resources. We know now the world is not a commodity.”**

**François Hollande** on Climate Change  
President of the French Republic



Department of  
Transport



# FUTUREPROOFING DEVELOPMENTS THROUGH DESIGN

A Bollard replaced just once every two years will cost around \$2 Million over the life of a development and money is not the only cost

## Bollards self-recover

Upon low-speed impact bollards absorb the impact force and slowly self-recover and are removable and reusable following severe impact



## No damage to footings

ZERO HERO Foundations remain in pristine condition for the entire lifespan of a development and base plates are reusable following severe impact



## Bollards Impact Resistant

ZERO Bollards are made from Australian heavy-duty materials designed to withstand impact without damage, remaining in good condition



## Bollard re-usable

Both surface mount and Inground bollards are removable and reusable following severe impact, saving thousands over the life of a development



## Footings reusable

ZERO Hero foundations remain in pristine condition and surface mount base plates are reusable following severe impact, saving thousands



## Simple replacements

Bollards are low cost to maintain. If damaged, they are removed and replaced in less than 5 minutes without the need for digging or heavy labour.



## Impact resistant base plate

With square base plates the impact force is concentrated on one anchor- with heavy duty round base plates the impact force is evenly distributed, reducing the risk of damage



## Superior protection

Unlike flexible bollards that can over-flex, the strong resistance core provides superior protection against errant vehicles, greatly improving safety



## Advanced Polymer Bollard

The advanced polymer bollards (and bollards covers) provide excellent resistance against denting, chipping and fading- extending the potential lifespan





Unlike cheap imports that dent and rust withing weeks, these stainless-steel Surface Mount Impact Recovery Bollards have been in St George's Terrace for almost ten years and remain in pristine condition today.



**STEEL BOLLARD**

Aussie made 150 mm 1650 ø galvanised steel 5 mm x 1200H powder coated safety yellow

**\$280 .00**



**STAINLESS BOLLARD**

Australian made 168 mm ø stainless-steel heavy-duty pipe x 1200H with satin finish

**\$520.00**



**POLY BOLLARD**

Advanced Polymer bollard 150 mm ø x 1200H in Safety Yellow smooth finish

**\$150.00**

Unlike cheap imported bollards ZERO WASTE Bollards are made to withstand harsh Australian conditions and to take impact from vehicles. Bollards and expensive concrete footings can be made re-usable even following severe impact, saving thousands over the life of a development **(see over for details)**

**Advanced Polymer Bollards**

- Safer, more durable, low-cost alternative to steel
- Impact and UV Resistant
- Wont scratch- same colour throughout
- Tyre marks wash off with damp sponge
- Wont damage vehicles
- Smooth Finish with dome cap
- Non-conductive
- Synergy / Western Power/DOT Approved



**MORE INFO**



Department of Transport



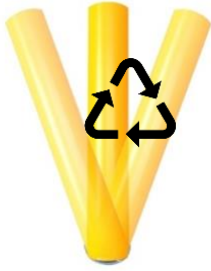
City of Fremantle



City of Perth

# IMPACT RECOVERY SYSTEM

Unless you incorporate some form of shock absorbing capability the bollard and footing will need replacing every time, costing thousands over the life of a development



## IMPACT RECOVERY

Bollards can be secured using the ZERO Impact Recovery System making bollards and footings impact resistant & reusable

## S/MOUNT IRS

Suitable for solid concrete footpaths and foundations. Secured using five evenly spaced concrete anchors. Base is reusable

**\$350.00**

## 350 DEPTH IRS

Suitable for most applications. As bollard absorbs impact force footings can be shallower than usually required.

**\$250.00**

## 650 DEPTH IRS

We recommend 650 mm Depth footings for free standing footings in soil or bollards subject to severe impact such as trucks

**\$300.00/ 400.00**

### Upon Low Impact

Bollards remain rigid and appear to be solid inground bollards but when impacted by a vehicle they absorb the impact force deflecting a maximum of 20 degrees and self-recovering, with no diminished capacity following hundreds of impacts

### Severe Impact

When severely impacted instead of the entire footing being dislodged, the inner resistance core bends allowing the bollard to fold but not be dislodged - preventing any further forward movement of the vehicle and enabling fast reinstatement

### Fast efficient replacements

Replacements are simple Following severe impact. The bollard is removed using tools, (resistance core replaced) and reinstated in less than 5 mins Bollards and Impact Recovery Rings are re-usable impact after impact, year after year

**MORE INFO**

 **work safe**

**100** YEARS  
★ ★ ★ ★ ★

# THE ONLY REPLACEABLE COMPONENT

The resistance core is sacrificial. When a bollard is badly impacted the inner resistance core can bend and need replacing. The Bollard, footings and Impact Recovery Rings are reusable impact after impact



## S/MOUNT RESISTANCE CORE

3.6 Walled Galvanised Steel. 300 mm Length with securing stud to secure core to base

**\$50.00**



## 350 MM DEPTH RESISTANCE CORE

3.6 Walled Galvanised Steel. 350 mm Depth (650 mm Length) with self-locking Taper attached

**\$70.00**



## 650 MM DEPTH RESISTANCE CORE

3.6 Walled Galvanised Steel. 650 mm Depth (950 mm Length) with self-locking Taper attached

**\$100**

### AUSTRALIAN MADE

The Resistance Core comes with a Self-locking Taper attached (or stud for the surface mount units). Rings are secured to the resistance core using clamps provided and are reusable.

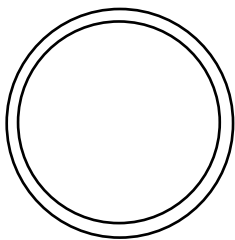


## INCREASE RESISTANCE

The resistance core is what stops a vehicle from any further forward movement. You can increase the strength of the resistance core by 150%, further reducing call outs and maintenance

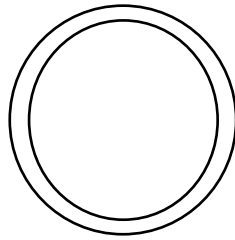


The Standard resistance Core is sufficient to stop a passenger vehicle and reduce the risk of injury to drivers and vehicles. Suitable for all installations



### STANDARD CORE

Standard Resistance Core is strong enough to stop a passenger vehicle and can be used with Surface Mount and 350 / 650 mm depth footing



### XHD CORE

The Extra Heavy Duty Resistance Core is substantially stronger so can only be used with 650 mm Depth footings

**\$200**

### EXTRA HEAVY DUTY RESISTANCE CORE

If you find the internal resistance core is bending too frequently (often due to trucks or utility vehicles impacting them) you can increase the inner core to Extra Heavy Duty Resistance Core. This will increase the resistance by around 150% and reduce the incidence of having to replace the inner core, but this strength internal resistance Core can only be used with 650 mm depth solid 30MPa concrete footings due to its strength. (Keeping in mind it will also provide a rigid object that will increase impact force acting upon a vehicle and therefore increase the risk of injury to vehicle occupants if impacted at high speed)

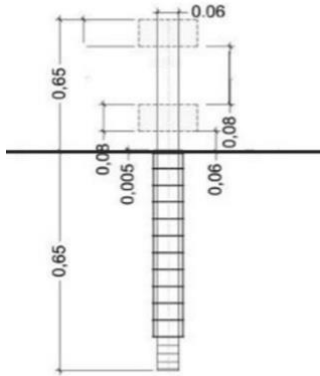
## SELECT DESIGN

First Choose the Bollard design from Steel, Stainless Steel or Advanced Polymer impact resistant Bollards. Advanced Polymer Bollard Covers also available

	<p>Steel 165 Ø 1200 L Powder coated (Can chip and scratch when impacted. Strong Australian steel)</p>		
	<p>Stainless steel 168 Ø Satin Finish (Strong Australian Stainless steel. Wont rust, dent, or show scratches)</p>		
	<p>Advanced Polymer 150 Ø Available in range of colours (UV Resistant - Won't rust or show scratches - dents don't show)</p>		
	<p>Advanced Polymer Bollard Cover 1200 H x 190 Ø (Great if the footings on your bollards are still strong)</p>	<p>NA</p>	

# SELECT FOOTING

First Choose the Bollard design from Steel, Stainless Steel or Advanced Polymer impact resistant Bollards. Advanced Polymer Bollard Covers also available

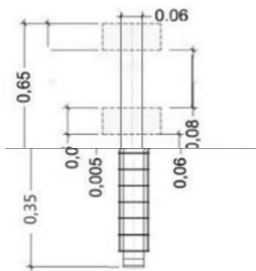


## 650 mm Depth Impact Recovery

Bollards secured on ZERO WASTE Foundations using the Impact Recovery System self recover from light impact and both the bollard and expensive footings are re-usable following even severe impact.

Best option for bollards subject to impact / impact from trucks and utility vehicles or when footing is installed directly in soil.

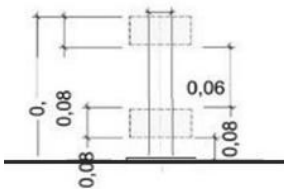
You can choose from a Heavy Duty or Extra Heavy Duty Resistance Core (See notes below).



## 350 mm Depth Impact Recovery

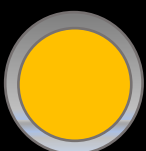
This is the most popular option for car parks and roadside parking where footing is installed in paved areas, existing concrete footings or asphalt.

For locations where bollards may be subject to regular impact from passenger vehicles bollards self recover from light impact. Both the bollard and Footing are re-usable following bad impact



## Surface Mount Impact Recovery

Easy installation into solid concrete footpaths, shopping centre or warehouse floors. Suitable for low speed environments where bollard may be subject to light impact from passenger vehicles,

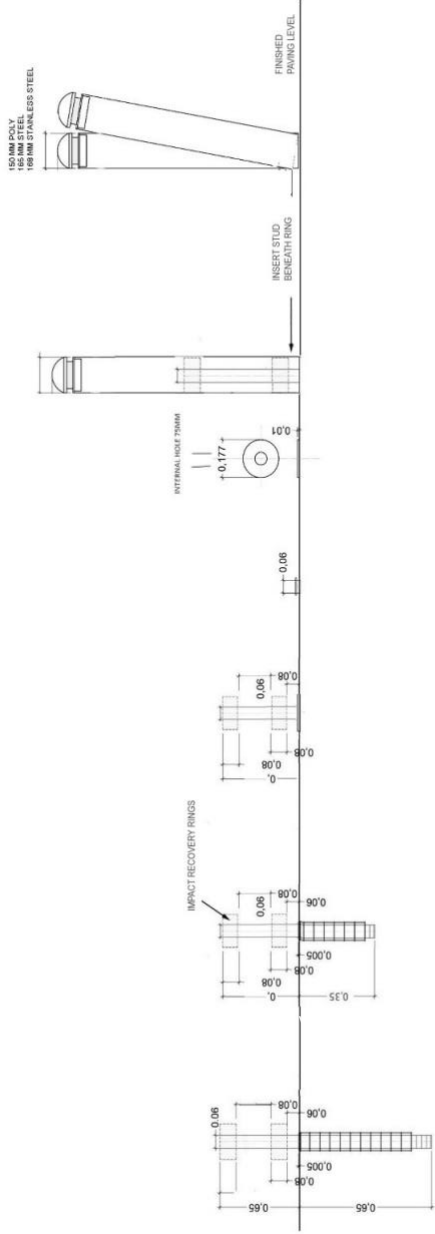
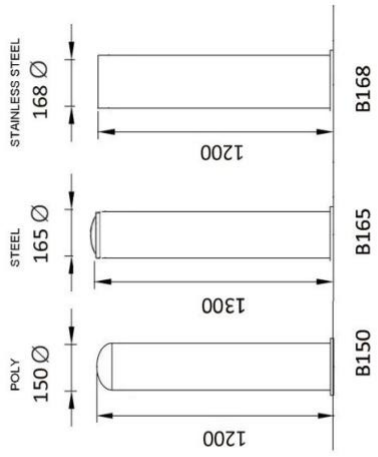


Heavy Duty Resistance Core will stop a passenger vehicle at low speed.

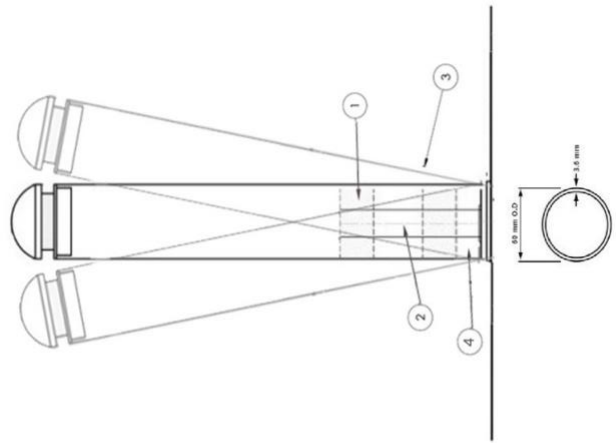


For bollards subject to impact by utility vehicles and trucks we suggest increasing Resistance Core to an Extra Heavy-Duty Core





**650 MM DEPTH    350 MM DEPTH    SURFACE MOUNT CAP    PROTECTIVE BASE PLATE    BOLLARD**



**COMPONENTS**

1. IMPACT RECOVERY RINGS
2. INTERNAL CORE 300 MM HIGH 3.6 WALL THICKNESS
3. BOLLARD CASING - POLY/ STEEL OR STAINLESS
4. SECURING STUD (SECURITY STUD AVAILABLE)

Stud is inserted in hole at base of bollard and sits below the bottom Impact Recovery Ring