STEEL BOLLARDS- 02 Impact Recovery

02





Put an end to
on-going repairs

It doesn't matter how big the bollard or footing is, unless you incorporate some form of shock absorbing mechanism the bollard and footing will need replacing every time a bollard is badly impacted

The reason is that the impact force seeks out the weakest component- and when a bollard is rigid it is the footing that takes the brunt of the force and no inground bollard will stop a truck, without severe damage to the footings.

> When impacted
> **something's got to give!**

It’s time to move from repetition **to resilience**



4 levels of protection

4 levels of protection to protect people and assets, protect bollards and surrounding foundations

1. Strong **resistance core**

Unlike spring-loaded bollards that can over-flex, the heavy-duty resistance core restricts bollard deflection to approximately 20 degrees under low-speed passenger vehicle impact. For higher-risk zones and areas subject to utility vehicle impact, the 650 mm depth IRS can be upgraded to an Extra Heavy Duty resistance core to further reduce the risk of bending

2. Impact **recovery rings**

Unlike springs that quickly wear out, creating dangerous litigation risks, our re-usable energy absorbing Impact Recovery Rings create a permanent shock absorbing cushion that absorb the impact force and self-recover, with no reduction in capacity following multiple impacts, greatly improving energy absorption, safety and resilience



4. Zero Waste **foundations**:

ZERO WASTE Inground Foundations are made from Advanced Polymers that protect the surrounding foundations when a bollard is impacted and continue working following multiple low and high speed impacts. Surface Mount are made from heavy duty base plate that is highly resilient to impact and with the sacrificial resistance core taking the brunt of the impact- the base plate becomes reusable following even severe impact.

3. Durable **Bollard casing**

A Heavy-duty impact resistant galvanised and powder coated steel pipe bollard made suing quality Australian steel. In coastal or high-salt environments, **316 stainless steel or Advanced Polymer bollards** are recommended for improved corrosion resistance and longer aesthetic life.





Bollard
safely recovers

Under low-speed or glancing impacts, the Impact Recovery Rings absorb the initial force, allowing controlled bollard deflection of up to 20° before the internal Resistance Core limits further movement.

The bollard then slowly self-recovers without dangerous spring-back.

Designed for repeated impacts, the ring system maintains its recovery performance over time while helping protect the footing from damage.

VIEW VIDEO



Fast efficient replacement

medium

Bollards are removable and ground socket can be capped (or another item such as a table or signpost installed)

If the bollard is pushed beyond 20 degrees, the Resistance core will bend and need replacing. The bollard remains safely secured in the footing and footings remain undisturbed.

1. The Bollard is slipped off the resistance core.
2. The Resistance core replaced
3. The bollard slipped back on



Inground **Impact Recovery System**

In-Ground Impact Recovery Bollards are suitable for almost any installation environment, including concrete, asphalt, and paved areas**.** Recommended foundation options

- **350 mm depth** — recommended for most applications
- **650 mm depth** — recommended where bollards may be impacted by utility vehicles or in areas subject to heavier contact
- **Extra Heavy-Duty Core** — recommended in higher-impact environments where reduced maintenance is a priority

The bollard remains rigid. (and cannot be deflected by hand) When struck by a vehicle, the Impact Recovery Rings absorb the impact force, allowing the bollard to deflect by up to **20°** before slowly self-recovering.

In more severe impacts, the internal Resistance Core may bend and require replacement.



Ground socket protects surrounding foundations from damage impact after impact

Cap included





Impact Recovery Rings are made from advanced urethane and rubber compound, withstanding hundreds of impacts

Surface mount **Impact Recovery System**

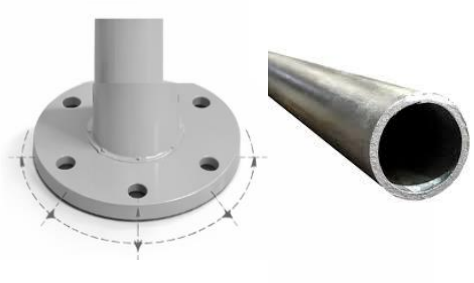
Surface Mount Impact Recovery Bollards are installed into solid concrete surfaces such as pavements, driveways, and slabs.

They remain rigid in normal use, but under vehicle impact the ring system absorbs the initial force, allowing the bollard to deflect up to **20°** and then slowly self-recover.

Following severe impacts, the internal Resistance Core may require replacement**.**



Heavy duty base plate with solid upright spigot resists bending and 5 evenly spaced anchors distribute impact force.



Heavy Duty Resistance core resistant forward movement of vehicles beyond 20 degrees.



Impact Recovery Rings are made from advanced urethane and rubber compound, repeated recovering following impact
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Design your impact
recovery bollard

1. **Choose your** Bollard casing

You can secure steel, stainless or Advanced Polymer Bollards on the Impact Recovery System.

Galvanised and powder coated Steel

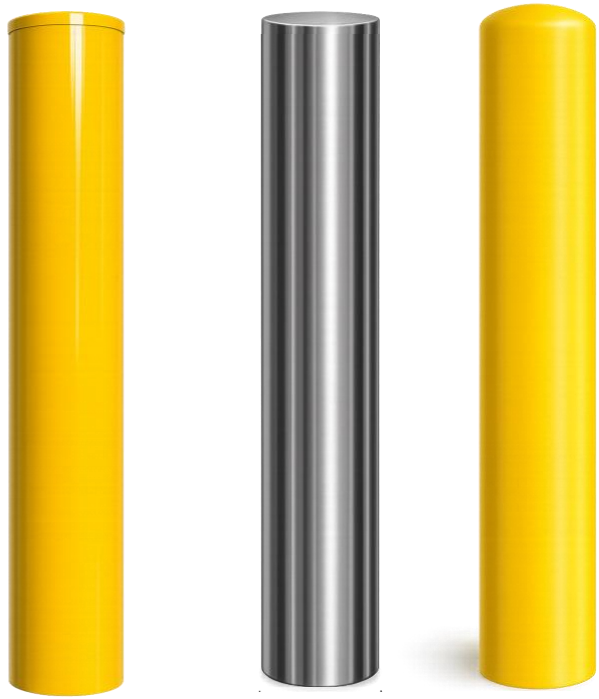
Suitable for industrial locations, but can chip and show scratches

Stainless steel

Stainless for aesthetically pleasing bollards – highly durable

Advanced Polymer

Advanced Polymer impact resistant bollards are suitable for most locations greatly reducing maintenance. Excellent for carparks.



2. Choose your installation method

Footing Options

- 350 Inground Heavy Duty
- 650 In-ground Heavy Duty
- 650 In-ground Extra Heavy Duty
- Surface Mount Heavy Duty

VISIT WEBSITE FOR SPECS & VIDEOS

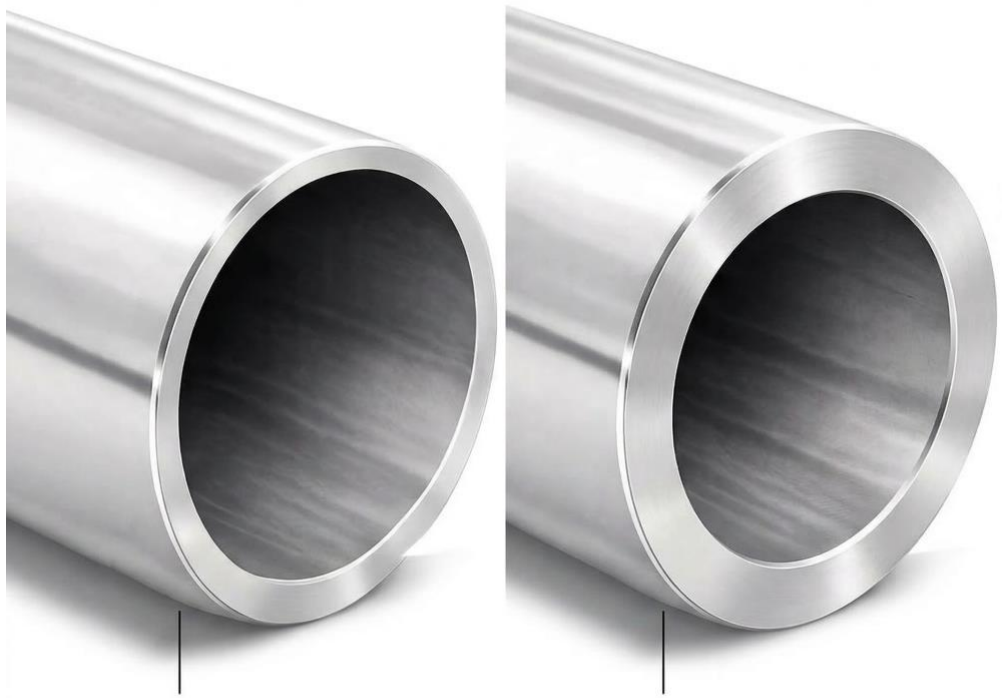


3. Choose your resistance core

For 650 mm deep foundations, an Extra Heavy-Duty Resistance Core is available, increasing bending resistance by up to 150%.

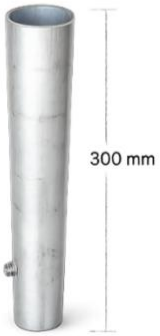
This can help reduce maintenance in areas exposed to impacts from utility vehicles, service vehicles, and trucks.

Note: Higher resistance may also increase the severity of vehicle damage on impact, so the maintenance benefits should be considered alongside the potential consequences of a harder collision.



Heavy Duty Resistance Core Extra Heavy-duty Resistance Core

Replacement
resistance core









Heavy Duty Galvanised Steel. 300 mm Length with securing stud to secure core to base	Heavy Duty Galvanised Steel. 350 mm Depth (650 mm Length) with self-locking Taper attached	Heavy Duty Galvanised Steel. 650 mm Depth (950 mm Length) with self-locking Taper attached	Extra Heavy Duty Galv. Steel 650 mm Depth (950 mm Length) with self-locking Taper attached

Bollard and footings re-usable. Only replacement component is the Resistance core

ZERO CIVIL

ADVANCED ZERO WASTE TECHNOLOGIES

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