Impact Recovery Bollards

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Should you require any further information please contact us or visit the website for installation details and videos.

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zerocivil.com

Steel
Bollard casing

Lifespan

10-15 years

- Australian Steel AS 4100
- 165mm Ø Galvanised Steel Pipe
- Cleaned
- Quality Polyester
- Knock-on Cap
- Hole drilled and tapped to accept securing stud

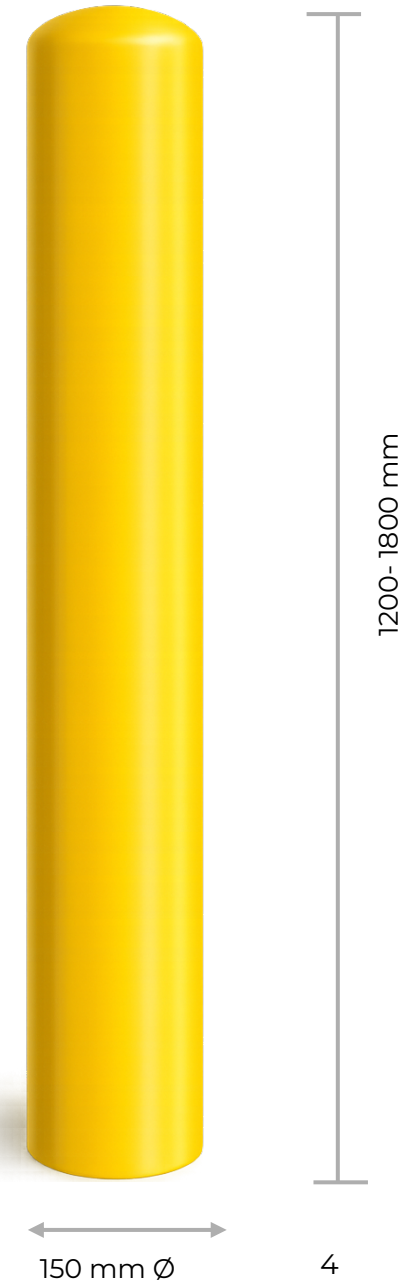
NOTE: 10-year corrosion warranty and 20-year chalk/colour fade warranty

Cheap powder coating can reduce lifespan to as little as 1-2 years before fading

Advanced Polymer
Bollard casing

Long life
25-50 years

- Australian Made
- Advanced Polymer Casing
- UV Stabilised (good in harsh sun)
- Long life 25 in direct sunlight- 50 years
- Heavy Duty 7mm walls
- Allows for a little “flex”
- Won’t rust or chip like steel powder coated bollards
- Excellent outdoor functional lifespan
- Dents and scratches don’t show
- Can be wiped clean tyre marks using Car polish
- Hole drilled to accept securing stud
- Reduces risk of damage to vehicles
- Non-Conductive



Stainless Steel
Bollard casing

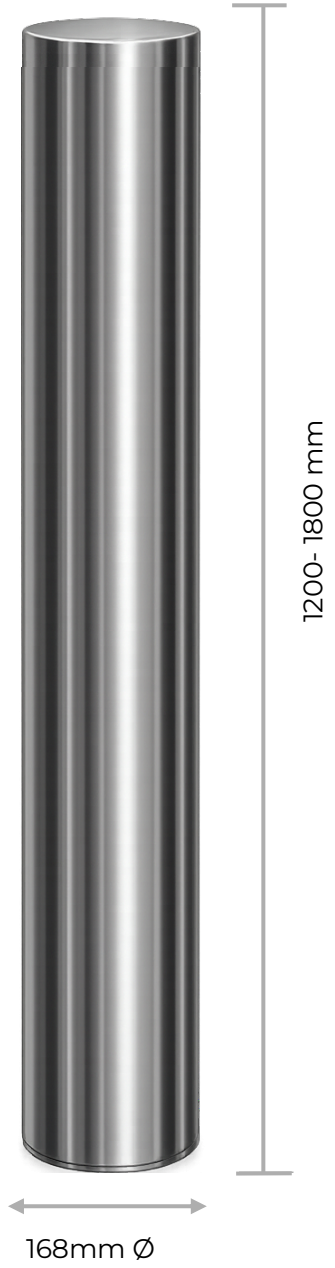
Long life
50 years

- Australian Stainless steel 304
  (316 available for coastal regions)
- 168mm Ø Stainless Steel Heavy Duty Pipe
- Cleaned & Polished to a Satin Finish
  (most durable finish)
- Seamless flat cap (slightly domed)
- Manufactured to secured height
- Hole drilled and tapped to accept
  securing stud

Compliance:

NOTE: ASSDA warns about imported 200-series stainless being sold as 304**,** which has caused corrosion failures

- Manufactured to ASTM A240/A480
- Mill Test Certificate available
- Welding compliant to AS/NZS 1554.6



Advanced Engineering overcomes these problems

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 WASTE Foundations remain in good working condition following both low and high speed impact. Base plates are reusable following impact

Bollards Impact Resistant

ZERO Bollards are made from Australian heavy-duty materials designed to withstand impact, remaining in good condition

Superior protection

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

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 WASTE 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

In-ground
Impact Recovery Bollard

Quality Bollards easy to install and maintain

Heavy 3.6 mm wall thickness Bollard casing is resistant to impact

Secured using the Impact Recovery System

Bollards self-recover from low impact, are removable and re-usable following severe impact

Flat (slightly domed) welded cap

Polished Satin finish (most durable finish)

Secured inground using 350 or 650 mm ground socket that locks units in- only removable using tools provided.

Cap provided to cover socket when bollard is removed.

unit
includes

- 2 x Impact Recovery Rings
- 2 x Stainless steel Securing Clamps
  (to secure rings)
- Heavy Duty Resistance Core with self-locking taper attached
  (60 Ø x 300 mmx 3.5 wall thickness)
- Securing stud
  (10 mm x 40 mm stainless steel)
- 350 mm Ground socket (two sockets required for 650 mm Depth footing)
- Cap for ground socket

TOOLS REQUIRED

Installation tool for socket
Removal tool to remove Resistance core
Screwdriver to remove clamps
Allen key to remove securing stud

Surface Mount
Impact Recovery Bollard

Quality Bollards easy to install and maintain

Heavy 3.6 mm wall thickness Bollard casing is resistant to impact

Secured using the Impact Recovery System

Bollards self-recover from low impact, are removable and re-usable following severe impact

Flat (slightly domed) welded cap

Polished Satin finish (most durable finish)

Secured on Re-usable Heavy Duty 10 mm thick x 300 mm diameter Stainless steel Base Plate

5 evenly spaced recessed High quality concrete anchors to evenly distribute energy reducing risk of damage

unit
includes

- 2 x Impact Recovery Rings
- 2 x Clamps (to secure rings)
- Resistance Core
  (60 Ø x 300 mmx 3.5 wall thickness)
- Securing stud
  (10 mm x 40 mm stainless steel)

Heavy Duty Base Plate

- 10 mm thick
- 200 mm diameter
- Upright spigot 100 mm High made from hollow bar.

Resistance Core
Resistance Core is a CH Steel 3.6 wall thickness, secured to base plate using an embedded grub screw.

Evenly spaced Concrete anchors
Surface Mount Base Plate is bolted down using 5 evenly spaced recessed concrete anchors to evenly distribute impact force and prevent damage to the base plate

TOOLS REQUIRED

Allen key
Screwdriver

Result of impact

low

When a bollard is impacted by a vehicle at low speed the Impact Recovery Rings absorb the impact force, enabling the bollard to deflect up to 20 degrees and self-recover.
Rings no sign of diminished capacity to recover following multiple impacts

medium

A strong resistance core is used to restrict forward movement of the vehicle beyond 20 degrees. When pressure exceeds the strength of the resistance core the core will bend and need replacing. The bollard remains secured in footing and footings remain undisturbed.

severe

Under severe impact (usually trucks and large utility vehicles) the Impact Recovery Rings absorb the initial force and slow the vehicle.

If the vehicle continues to move forward, the resistance core bends and will require replacement.
We now have an Extra Heavy Duty Resistance Core that increases resistance to bending by 150%

Re- use components

foundations

As the rings and then the resistance core take the impact force, footings remain in good condition following impact

rings

Remove and re-use Impact Recovery Rings following multiple impacts

bollard

Bollards can be removed and re-used impact after impact. (May require repolishing if badly damaged)

Impact rating chart

Chart demonstrates the likely impact response compared with standard steel and stainless steel inground and surface Mounted Bollards.

Option	Resilience	Likely Impact Response	Key Benefits
Tube – Surface Mount	**Low around 1-3 km/h**	Tube is 1.3 mm thick and will easily bend or deform upon vehicle impact.	Not suitable for bollard subject to impact. Decorative or indoor only.
Tube – In-Ground	**Low around 1-3 km/h**	Tube may bend or fold under impact. (Refer to image on back page)	Not suitable for bollard subject to impact. Decorative only.
Pipe – Surface Mount	**Med around 5-8 km/h**	Depending upon weight of base plate (we use Heavy duty to increase resistance)	Easier retrofit than in-ground, strong visual presence, easier replacement than direct-set
Pipe – In-Ground	**Med around 8-12 km/h**	Bollard better withstands impact, but force is transferred into footing and surrounding pavement	Strongest rigid asset protection and can be concrete filled- although costly to maintain
Pipe – SM IRS	**High 10-16km/h**	Impact Rings absorb initial impact energy then resistance core which bends with continued force	Reusable mounting system, easier install and replacement
Pipe – IG IRS 350	**Very High 12-18 km/h**	Impact Rings absorb initial impact energy then resistance core which bends with continued force	Strong balance of resilience, maintainability and easier reinstatement; suitable for asphalt and standard concrete footing areas
Pipe – IG IRS 650	**Very High 15-22 km/h**	Better suited to repeated or heavier accidental impacts; reduced risk of bollard and footing damage	Greater embedment for more demanding locations, easier replacement, reduced maintenance
Pipe – IG IRS 650 XHD	**Extreme 18-28 km/h**	Most resilient option in the range; impact recovery system minimises damage to bollard and footing in severe service conditions	Highest level of resilience and durability, best for repeated strikes and tougher environments

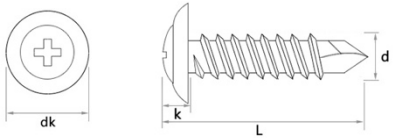
*Speeds are indicative only. Assumes typical 45° impact from 1800kg passenger vehicle. Failure defined as permanent bollard bend or footing disruption or IRS Resistance Core yield (assuming footings are installed according to Directions provided).

In-ground
Footings **02-**01

- 350 mm Depth (suitable for most locations as the Impact Recovery System absorbs the energy, thus reducing the need for large footings)

- 650 mm units (using 2 ground sockets) are advised for industrial locations where bollard may be subject to more intense impact forces. Or where there are no existing foundations to help secure the footing (i.e. free standing footing installed in soil or paving)

- If using the Extra Heavy Duty core, you can extend footings to 950 mm depth and add a reinforcement reo cage to the footing)



Stainless Steel Self Drilling Screws come with a sharp, piercing tip or a flat, blunt tip. The sharp tipped screws are designed for drilling their own hole into softer materials such as wood and plastic so unlike self-tapping screws, they don't need a pilot hole. DK 5 K 1 L 9.5 D 5

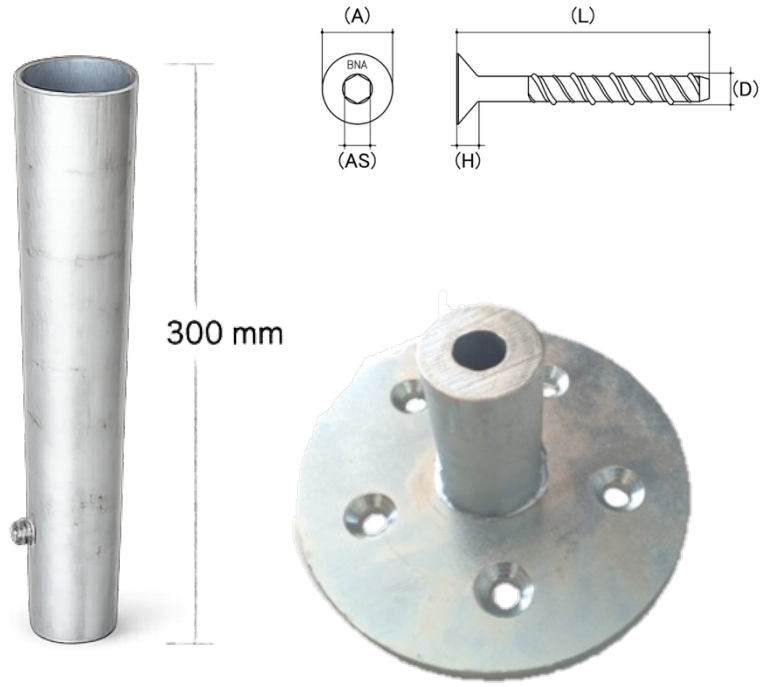
Surface Mount
Base Plate **02-**02

Heavy Duty Base Plate

- 10 mm thick
- 200 mm diameter
- Upright spigot 100 mm High made from hollow bar.

Resistance Core
Resistance Core is a CH Steel 3.6 wall thickness, secured to base plate using an embedded grub screw.

Evenly spaced Concrete anchors
Surface Mount Base Plate is bolted down using 5 evenly spaced countersunk M10 x 100 mm concrete anchors (D=10 L=100) to evenly distribute impact force and prevent damage to the base plate



Impact Recovery
Rings **02-**03

Available in 3 dimensions to secure

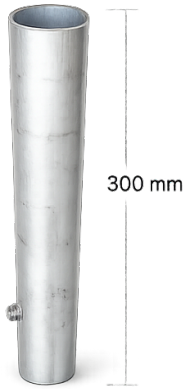
- Advanced Polymer bollards 150 mm Ø
  7mm wall thickness

- Steel Bollards 150NB (165 mm Ø)
  5 mm wall thickness

- Stainless Steel Bollards (168 mm Ø)
  3.4 mm wall thickness

CODE	IMPACT RECOVERY RINGS	WEIGHT
IRR-150	Ring to fit 150 Advanced Polymer Bollard	1 kg
IRR-165	Ring to fit 165 mm Steel Bollard	1 .25 kg
IRR-168	Ring to fit 168 mm Stainless Steel Bollard	1 .56 kg

Resistance
Core **02-**04



S/MOUNT HD RESISTANCE CORE

Heavy Duty Galvanised Steel. 300 mm Length with securing stud to secure core to base

350 MM DEPTH HD RESISTANCE CORE

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

650 MM DEPTH HD RESISTANCE CORE

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

650 MM EXTRA HEAVY DUTY RESISTANCE CORE

Extra Heavy Duty Galv. Steel 650 mm Depth (950 mm Length) with self-locking Taper attached

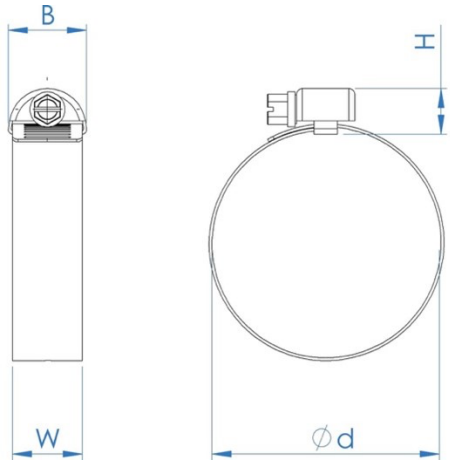
RINGS ATTACHED

Resistance Core shown here with two Impact Recovery Rings attached. Please Note: *Images show original rings without ribs.*

Securing Clamp **02-**05

Used to secure Impact Recovery Rings to Resistance Core

- Stainless Steel Clamps
- 78-102 mm Ø
- 304 Stainless Steel
- 15 mm width
- Supplied with Rings
- Tightened using screwdriver



Bollard casing weights and dimensions

Our bollards are made from heavy duty materials- quality steel Australian made, and UV stabilised Advanced Polymer compound (Non-conductive).

CODE	DETAILS	WEIGHT
GALV STEEL	165 mm Ø x 5 mm wall thickness x 1650 L	34 kg
GALV STEEL	165 mm Ø x 5 mm wall thickness x 1200 L	25 kg
STAINLESS STEEL	168 mm Ø x 3.6 mm wall thickness x 1200 L	1 8.8 kg
ADVANCED POLYMER	150 mm Ø x 7 mm wall thickness x 1800 L	5.2 kg
	150 mm Ø x 7 mm wall thickness x 1200 L	3.5 kg

Components weights and dimensions

Only replaceable component is the resistance Core. * NB can be made under license, but distributors and clients are NOT authorised to make these without a license to ensure quality control.

CODE	DETAILS	WEIGHT
IRR-150	Ring to fit 150 mm Poly Bollard	1 kg
IRR-165	Ring to fit 165 mm Galvanised Steel Bollard	1.25 kg
IRR-168	Ring to fit 168 mm Stainless steel Bollard	1.3 kg
RCORE-SM	Galvanised Resistance Core x 300 mm	1 kg
RCORE-350	3.6 Galvanised Resistance Core x 650 mm	2 kg
RCORE-650	3.6 Galvanised Resistance Core x 950 mm	3 kg
RCORE-XHD	5.5 Galvanised Resistance Core x 950 mm	7.5 kg
TOOLPACK	Pack of tools Install & removal	12 kg
CON-ANCH	Concrete anchors	

Required
Tools

Installation tool used to correctly align socket, enables installation of ground socket from standing position

Removal tool used to lever items from ground socket, operated from standing position, facing traffic, (sheared post removal attachment included)

Advanced Polymer
Non-conductive bollards

Advanced Polymer Bollards offer:

- high impact resistance
- excellent toughness
- flexibility under load
- reliable performance across a wide range of temperatures
- reduced risk of brittle failure over time

Under lighter impact, the material can flex and recover. Scuff marks from tyres can typically be cleaned away without affecting the structural performance of the bollard.

Long life

Many plastic products exposed to sunlight will eventually fade, chalk, crack, and become brittle as ultraviolet radiation breaks down the polymer structure over time. This often leads people to assume that polymer bollards will not last in the sun. That is not the case with our Advanced Polymer Bollards.

Our Advanced Polymer material is specifically formulated for demanding outdoor environments, helping the bollard maintain its **s**trength, flexibility, appearance, and structural integrity over the long term.

UV Resistance

Australia experiences some of the highest UV radiation levels in the world, so ultraviolet protection is critical for any polymer used outdoors. Our UV stabilisation package provides a much higher level of protection than the Australian industry standard (AS/NZ 4766:2006).

Through careful selection of a high-quality Polyethylene base polymer specifically designed for outdoor use, advanced additives such as UV stabilisers and antioxidants, pigmented “SUPA UV” provides a UV36 level of stabilisation to protect against the harmful effects of prolonged sun exposure. This helps prevent:

- brittleness
- chalking
- cracking
- warping
- premature material breakdown

Impact Resistance

Unlike rigid materials that may dent, deform, or permanently distort under impact, Advanced Polymer is able to absorb and disperse impact energy**.** This gives the bollard cover excellent toughness and helps reduce the risk of cracking or permanent visual damage from everyday contact.

Heavy Duty Construction

Advanced Polymer Bollards and Bollard Covers are rotomoulded as a solid one-piece unit with heavy-duty 7 mm wall thickness**.**

This robust construction provides:

- increased durability
- improved shape retention
- strong resistance to distortion
- long-term structural stability
- dependable performance in hot outdoor environments

The one-piece moulded design also removes weak joins and helps ensure consistent wall strength throughout the cover.

Appearance Retention

Durability is not only about impact performance — it is also about how well the product continues to look over time.

Because Advanced Polymer is **c**olour-fast and coloured throughout the material**,** scratches and minor surface scuffs are far less noticeable than with painted finishes. Unlike powder-coated steel, the colour is not just on the surface.

This provides several practical benefits:

- improved appearance retention
- reduced visibility of scratches and marks
- no paint chipping
- easy cleaning after tyre scuffs or contact marks

Recovery Performance

Advanced Polymer Bollard Covers are designed to flex under load and recover from light impact.

When combined with the **ZERO WASTE Impact Recovery System**, the bollard system provides even greater resilience, allowing bollards and footings to remain reusable following even severe impact

Technical Properties

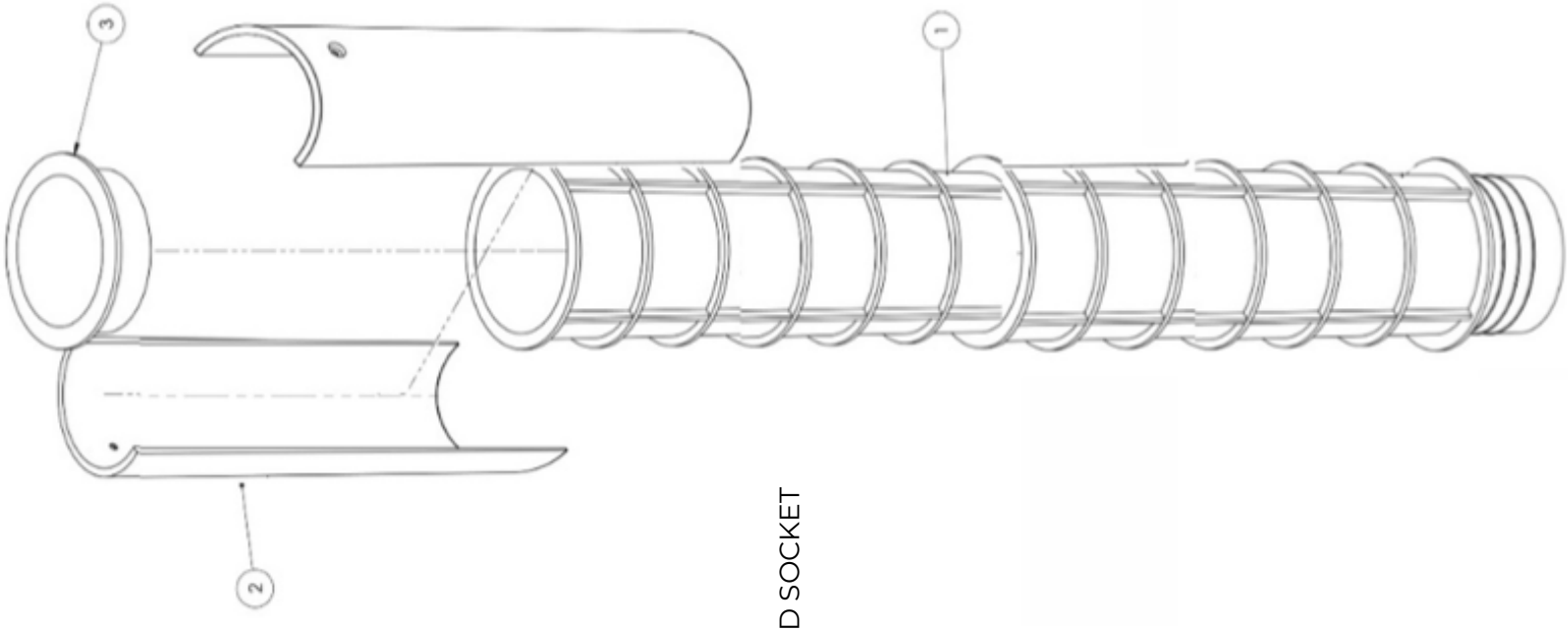
- **Material:** Advanced Polymer
- **Base Description:** UV-stabilised material
- **Wall Thickness:** 7 mm
- **Manufacturing Method:** One-piece rotomoulded construction
- **Tensile Strength at 72°F:** 1,400 psi
- **Tensile Modulus:** 57,000 psi
- **Tensile Elongation at Break:** 100%
- **Flexural Modulus:** 29,000 psi

FLEXES

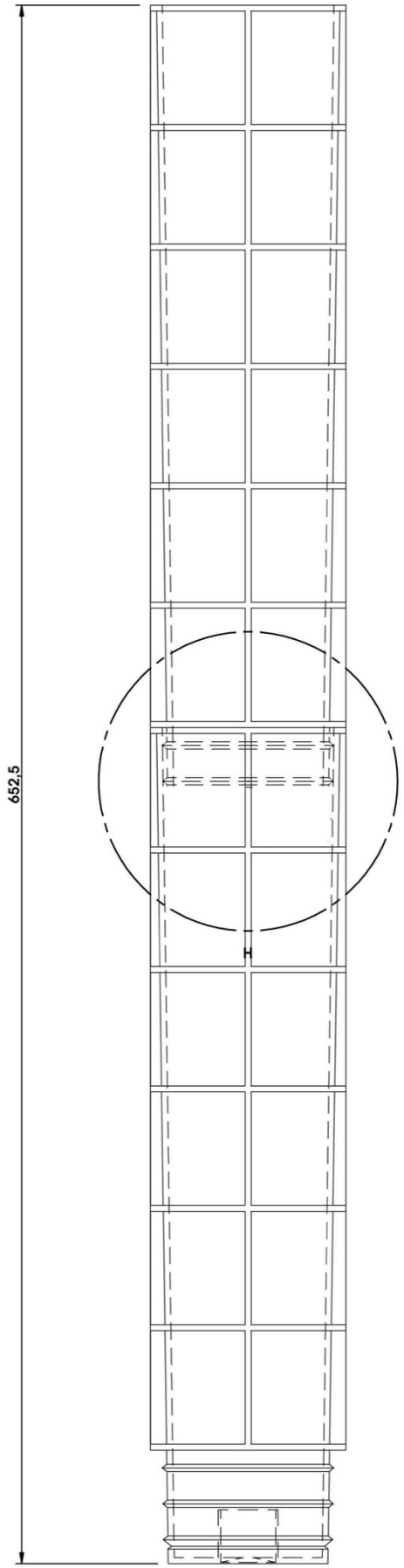
IRS: DEFLECT 20 DEGREES

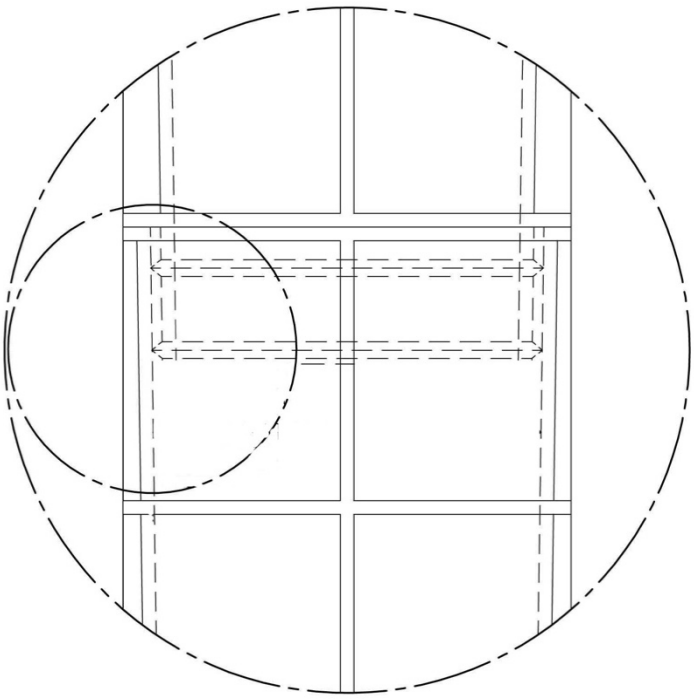
MATERIAL LIFESPAN

Advanced Polymer Bollards and Bollard Covers have a design life of around 50 years (25 years in direct sunlight).

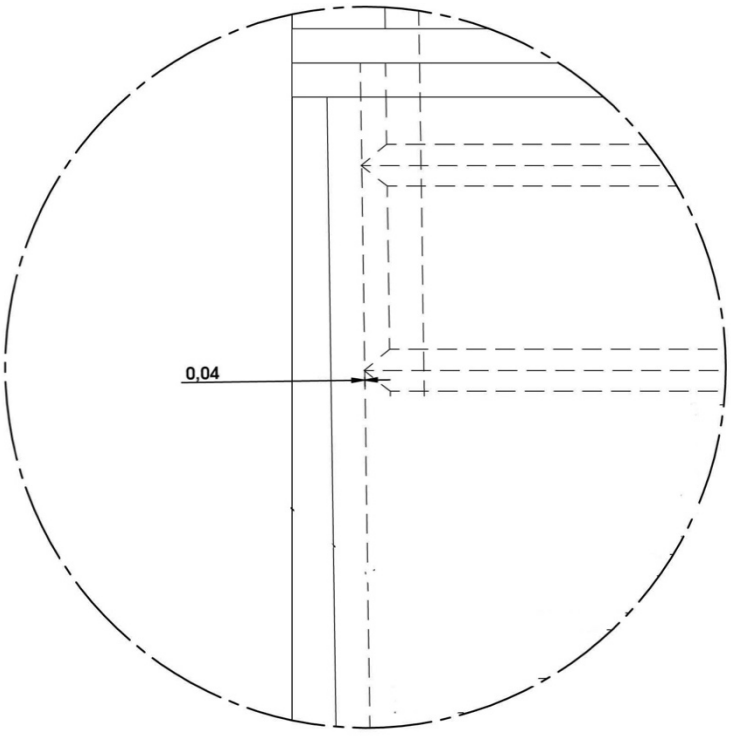


1. GROUND SOCKET
2. TAPER
3. CAP





DETAIL H



DETAIL I

REV	DESCRIPTION	DRN	DATE	CHK

TOLERANCES EXCEPT WHERE STATED ON LINEAR ±5mm ANGLES ±1°

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SHOWN

TITLE: SMART AUTO-LOCK TAPER

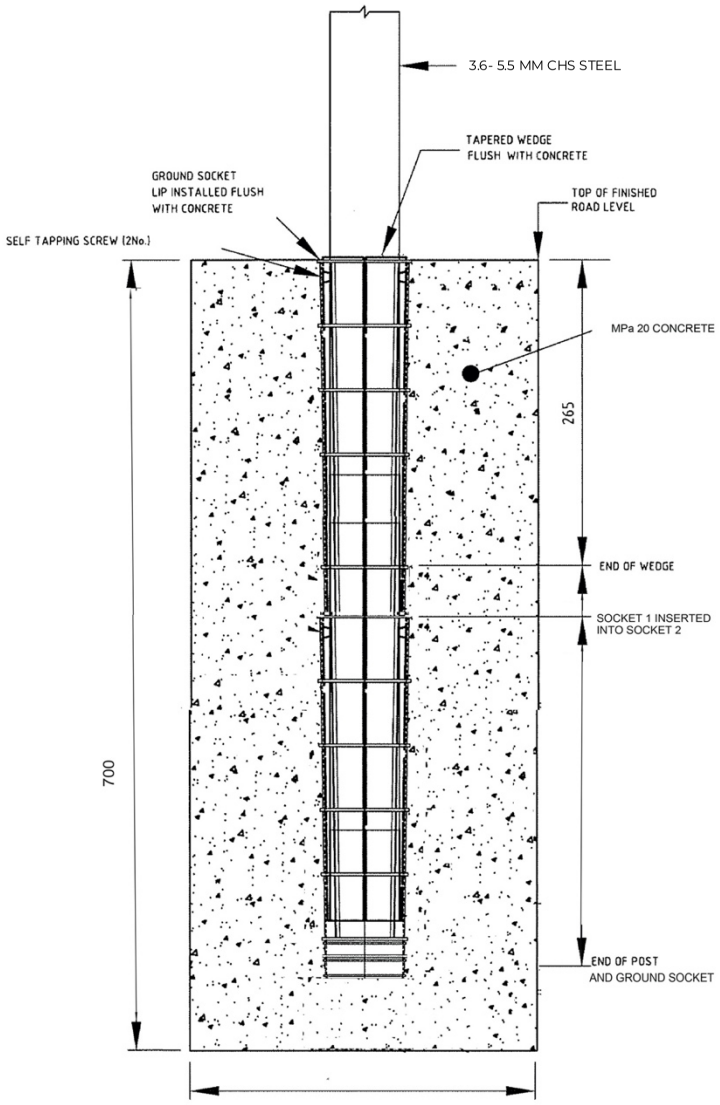
CLIENT: SMART URBAN PTY LTD

	BY	DATE
DRN	Daniel	7/05/2009
CHK		

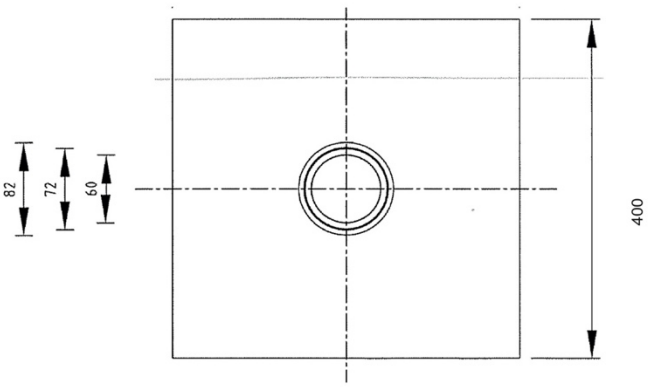
SCALE: N.T.S SIZE: A3

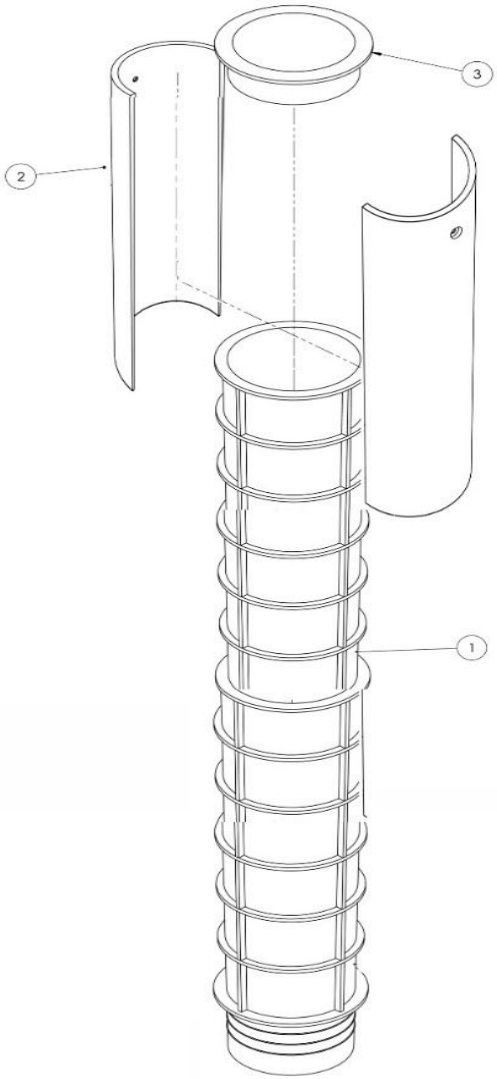
DRAWING NUMBER: XXXXX REV: 0

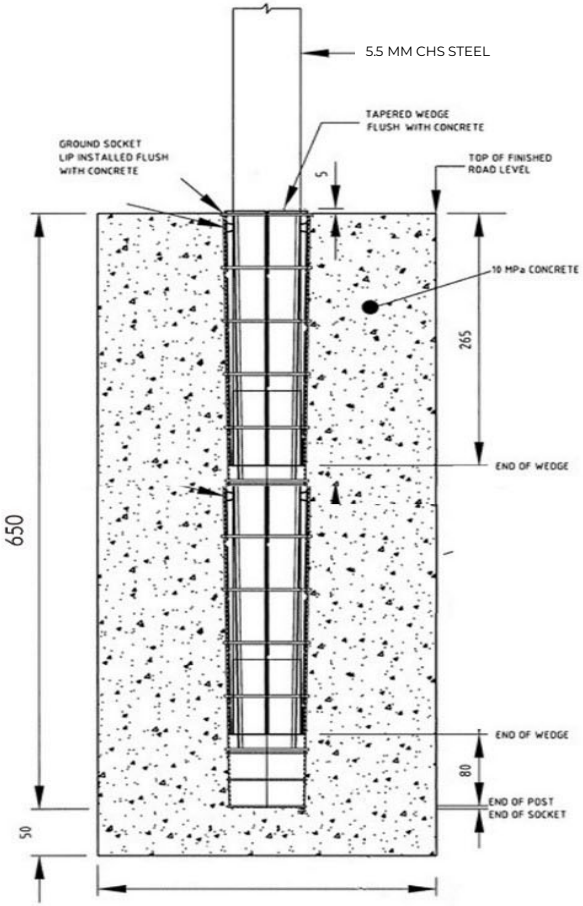
SHEET: 5 OF: 6 ISSUE: A



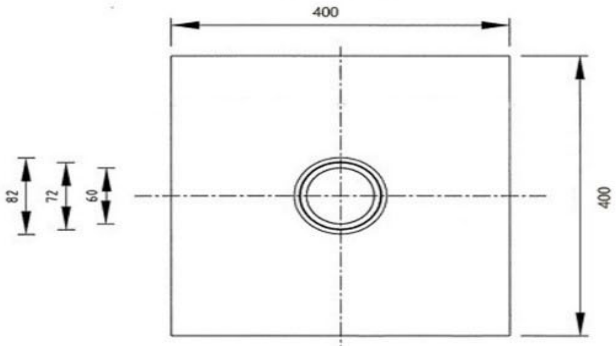
SECTIONAL ELEVATION
FOOTING



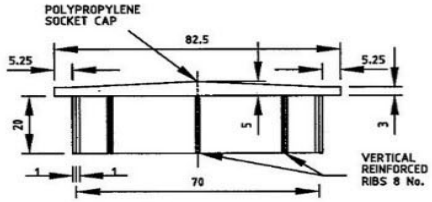




SECTIONAL ELEVATION
FOOTING



PLAN



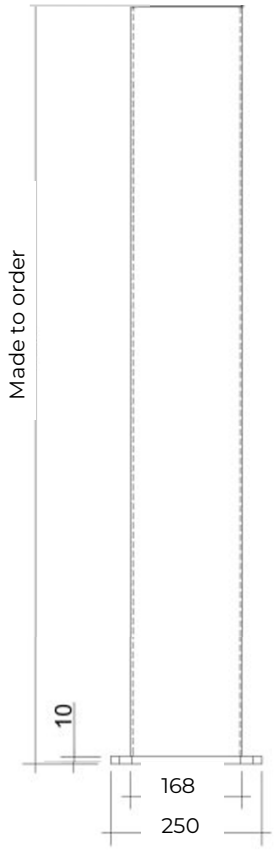
ELEVATION
SOCKET CAP

NOTES

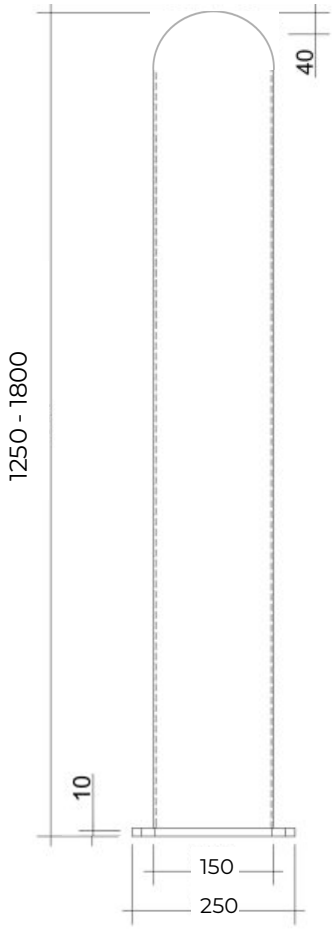
To secure the Extra Heavy Duty Resistance Core you need a 650 mm Depth 30MPa concrete footing

If installing footing in sand, we suggest using a reo cage to reinforce the concrete footing.

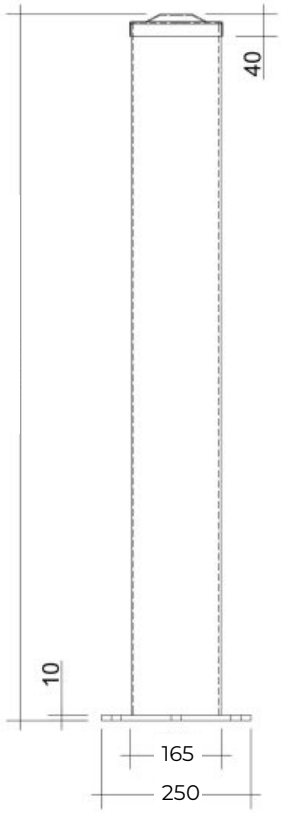
Stainless Steel

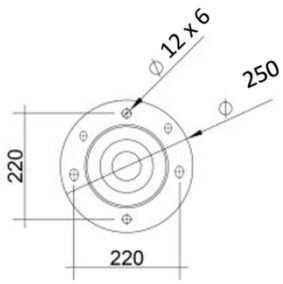


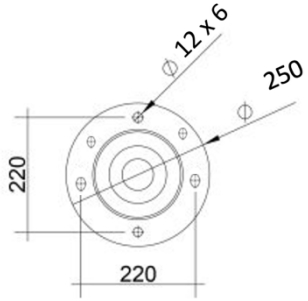
Advanced Polymer

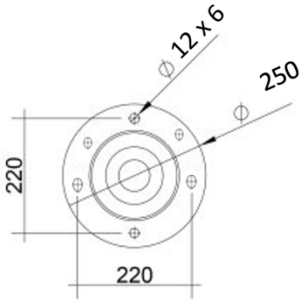


Galv Steel



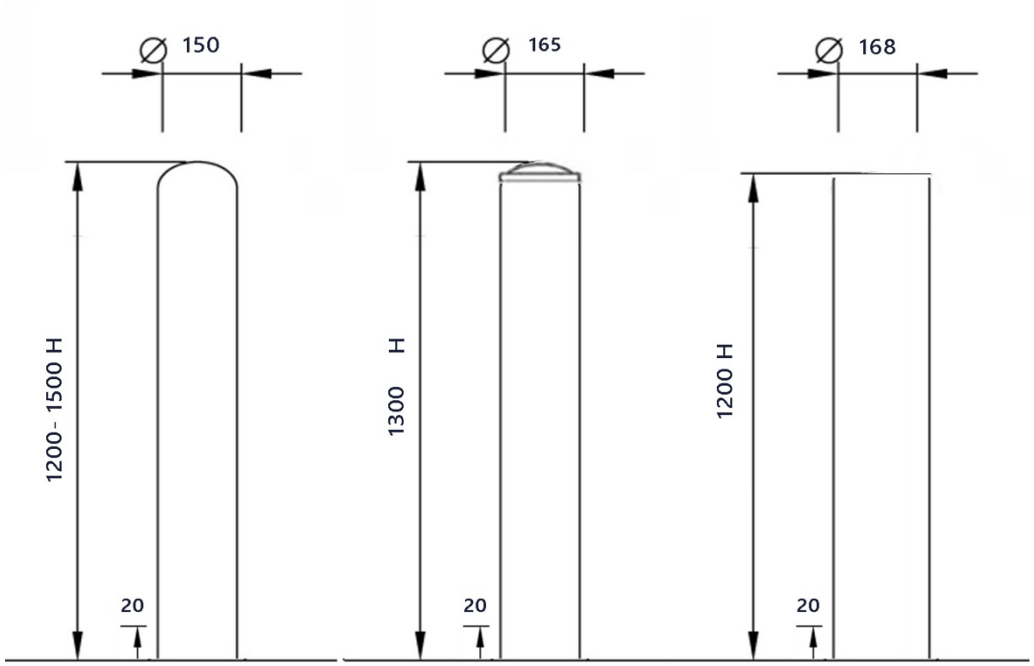




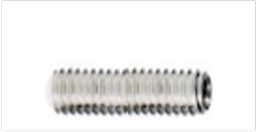


SURFACE MOUNT IRS

Solid 10 mm Base plate with evenly spaced anchors evenly distributes impact force to reduce damage.

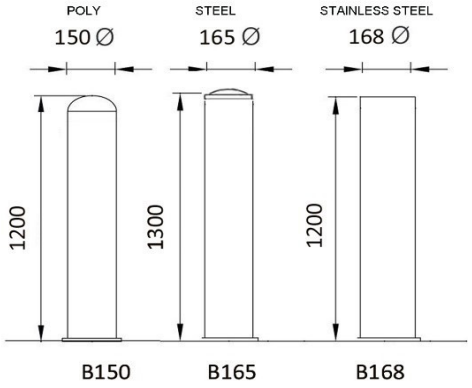


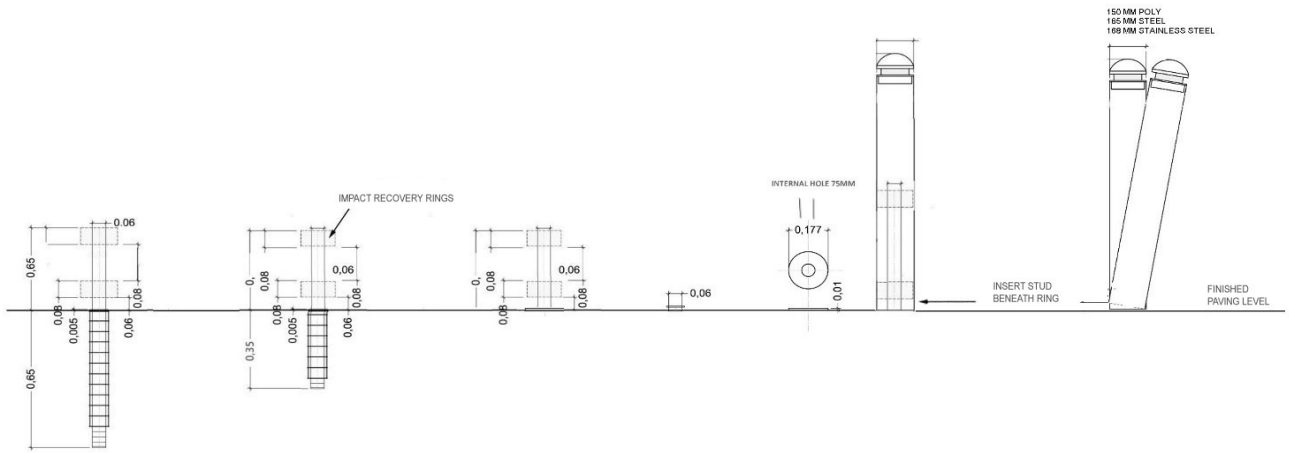
HOLE TO ACCEPT 10 MM STUD



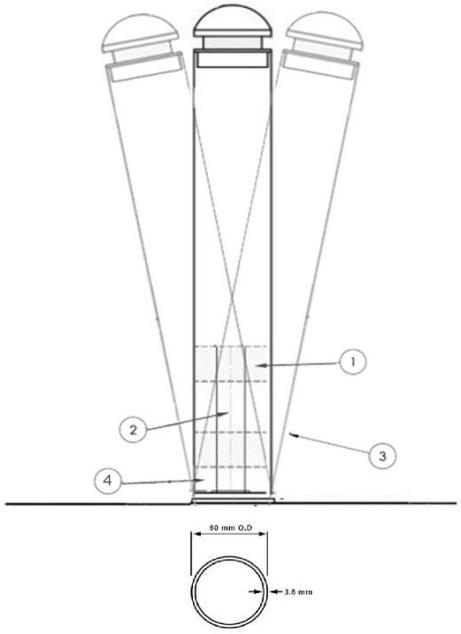
* Hole must be drilled (and tapped) approx. 20 mm from base of bollard to accept 10 mm stud. Advanced Polymer do not need tapping - suggest using 8.5 mm drill bit.

Stud must sit “below” bottom ring- should not bite into ring.





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

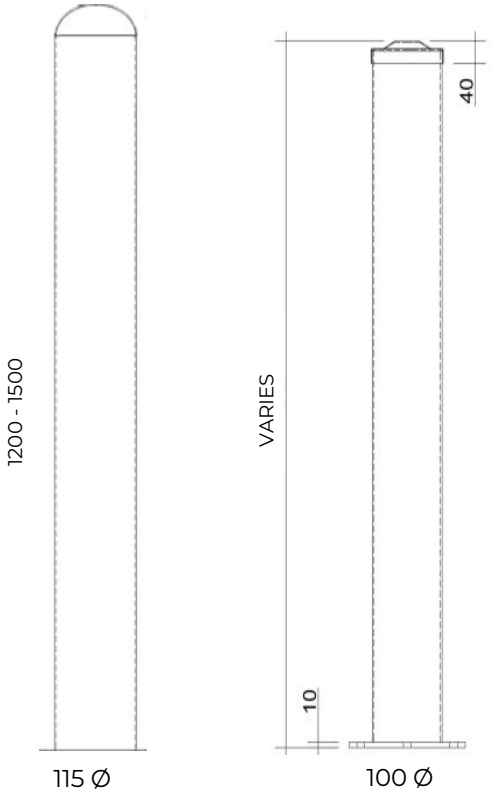


COMPONENTS

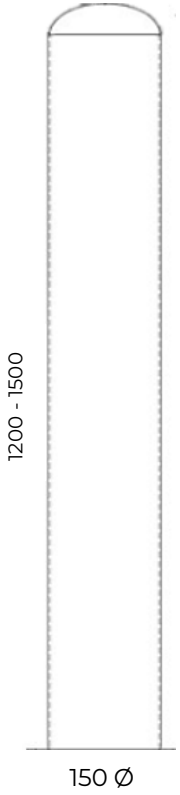
1. IMPACT RECOVERY RINGS
2. INTERNAL CORE 300 MM HIGH 3.6 WALL THICKESS
3. BOLLARD CASING - POLY/ STEEL OR STAINLESS
4. SECURING STUD (SECURITY STUD AVAILABLE)

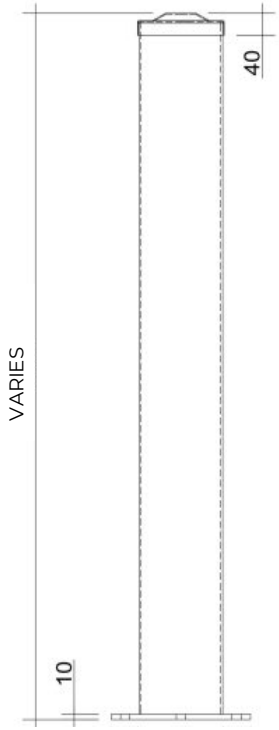
Stud is inserted in hole at base of bollard
and sits below the bottom Impact Recovery Ring

ZEROCIVIL

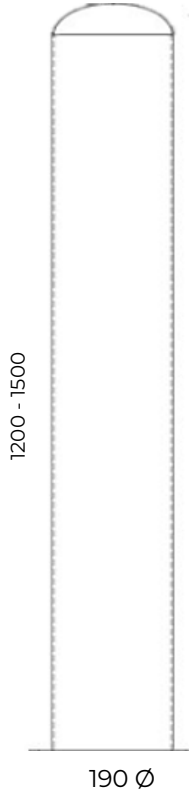


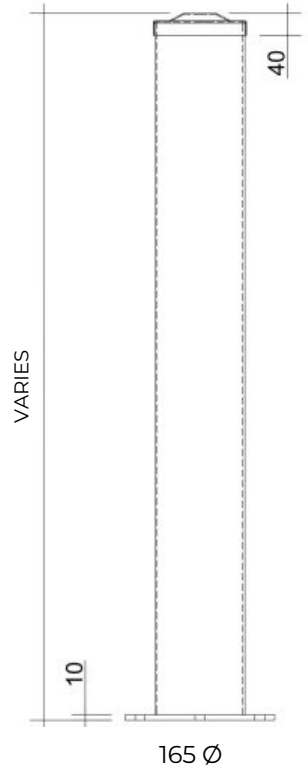
Fits 100 mm ∅ or less





Fits 130 mm ∅ or less





Fits Galv Steel Bollard 165 mm ∅

BOLLARD COVER DIMENSIONS

Available in a large range of colours- ask for colour chart

Colour Chart: Advanced Polymer
Non-conductive bollards & Bollard Covers

05 WHITE

551 BLOOD RED

61 ORANGE

526 MAGENTA

539 PURPLE

18 YELLOW

257 LIME GREEN

209 LIGHT GREEN

329 TEAL

326 DARK BLUE

35 LIGHT BLUE

234 RIVER GUM

70 BLACK

89 SLATE GREY

206 MIST GREEN

2081 HERITAGE GREEN

890 ARMOUR GREY

930 WHEAT

392 MOUNTAIN BLUE

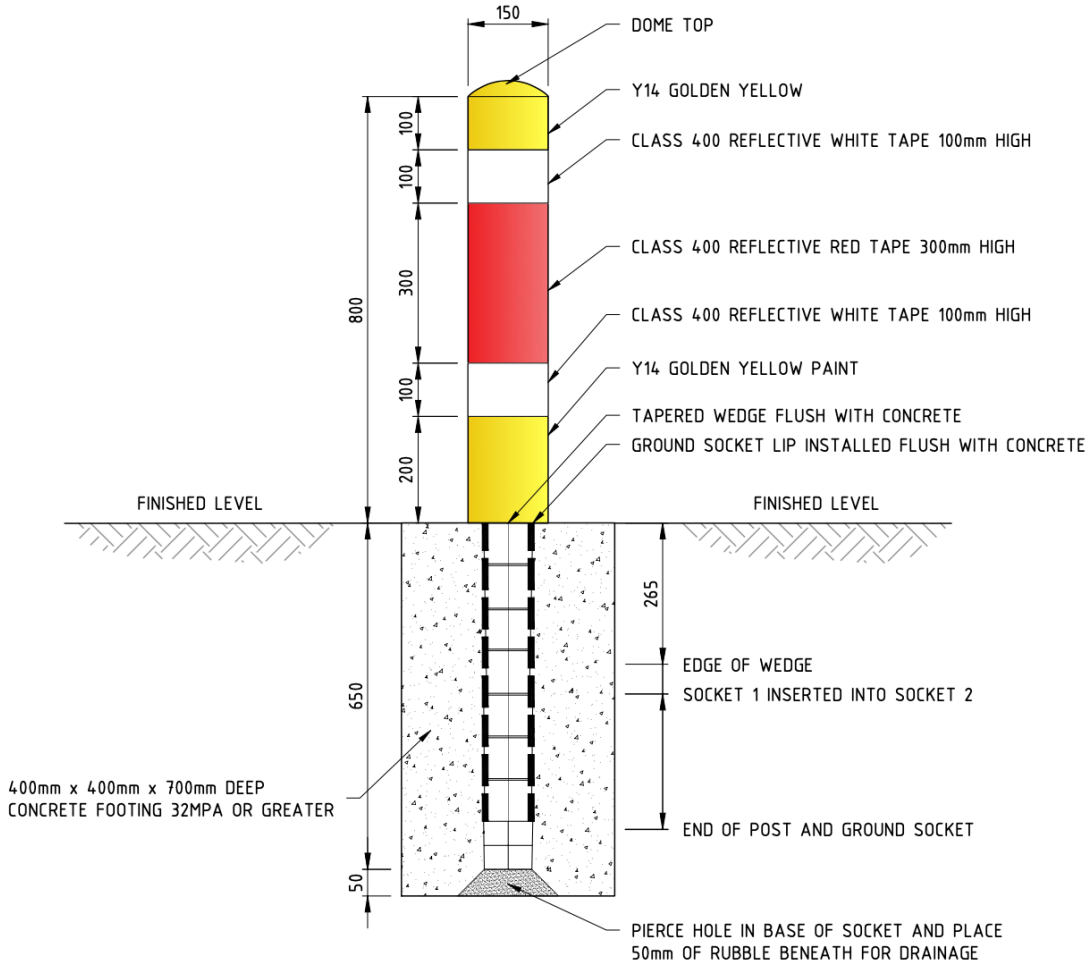
918 MERINO

916 BEIGE

947 SMOOTH CREAM

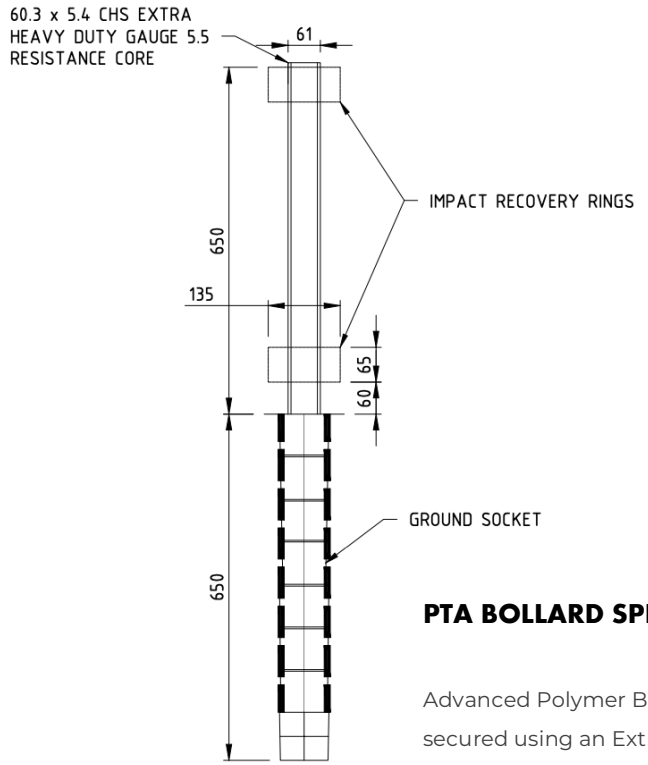
45 HERITAGE RED

GAS	LOCAL GOVERNMENT REQUIREMENTS; FOR EXAM (GAS DISTRUBUTION NETWOR
SEWER + WATER	AS/NZS 3500.1



BOLLARD DETAIL

SCALE 1:10



BOLLARD INTERNAL COMPONENT DETAIL

SCALE 1:10

PTA BOLLARD SPECS

Advanced Polymer Bollards secured using an Extra Heavy Duty Resistance core on 650 mm Depth ZERO WASTE Foundations.

Mill certificate

UTKARSH INDIA LIMITED

AN ISO 9001:2015 CERTIFIED COMPANY

Office
Regd. Office : Arrjavv Square ,4th Floor ,95A ,Elliot Road , Kolkata-700016
, Ph. No.: 91-33-2230-9124/25/9157, Fax: 91-33-2230-5384
Website: www.utkarshindia.in, email: info@utkarshindia.in

UTKARSH
Life demands. We deliver.

ISO 9001 : 2015 MGMT. SYS RvA C 10E

MANUFACTURER QUALITY CERTIFICATE

- QUALITY CERTIFICATE NO. : UIL/EXP/DITH/AUS/021/25-26, Date : 14.05.2025
- CLIENT NAME : **DITH AUSTRALIA PTY LTD**
  LEVEL 30,31 MARKET STREET
  SYDNEY, NSW 2000
  AUSTRALIA
- MANUFACTURER : **UTKARSH INDIA LIMITED**
- CONTRACT NO. : 7503014428
  PI/UIL/EXP/DB/24-25/1740, Dtd: 05.03.2025
- LOT NO. : 4958-M4
- SPECIFICATION : AS 1074
- Description of Goods / Services : *ERW WELDED GALVANIZED STEEL PIPES*

Sl. No.	Size (mm)	Ends	Thickness (mm)	Length (mm)	Total Number of Bundles of Each Size	Pieces Per Bundle of Each Size	Total Length of Each Size in Meters	Theoretical Weight of Each Size (kg	Pcs.	Heat Number	Chemical Properties						Mechanical Properties					Galvanizing
											C%	Mn%	P%	S%	B%	CE	TS Range (MPa) 320-460	Min Yst (Mpa) 195	Min EL% 20	Bend Test	Flattering Test	Mass of Zinc Coating g/m² (Min-296)
											---	---	Max 0.045	Max 0.045	Max 0.0008	Max 0.40						
1	NB 32	PE	3.20	6500	15	61	5947.5	18399	915	2550987	0.10	0.25	0.013	0.009	<0.0008	0.141	420	321	30	PASSED	NA	432/441
2	NB 50	PE	2.90	6500	5	37	1202.5	4936	185	2551014	0.08	0.28	0.016	0.011	<0.0008	0.126	417	318	31	PASSED	NA	428/432
3	NB 90	PE	4.00	6500	2	19	247	2378	38	2502028	0.06	0.36	0.016	0.008	<0.0008	0.120	418	320	31	NA	PASSED	430/439

Note:

1. TS = Tensile Strength, YS = Yield Strength, EL = Elongation (* S1 Inner Surface, * S2 Outer Surface)
2. It is certify that each steel tubes is hydrostatically Tested to test pressure of 50 Bar - passed for 5 Second, Found to be satisfactory. No Leakage & Pressure Drop.
3. All the Visual Finish & Dimensional characteristics like O.D., Thickness conform to the specified limit & tolerance.
4. All pipes are marked as per PO.

- Country of origin for supplied goods- **INDIA**
- Supplier of HR coils is **STEEL AUTHORITY OF INDIA LIMITED** which is used for manufacturing the HDG Pipes

AUTHORIZED SIGNATORY

UTKARSH INDIA LIMITED KOLKATA

Interpon®

SAFETY DATA SHEET

JE025QF 30-2168 INTERPON 600 SAFETY YELLOW

Section 1. Identification

GHS product identifier : JE025QF 30-2168 INTERPON 600 SAFETY YELLOW

SDS code : 8133005
JE025QF/25KG

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Industrial use

Uses advised against
Consumer use

Product use : Electrostatic coating for use in industrial plants

Supplier's details

Akzo Nobel Coatings Inc.
150 Columbia Street
Reading, PA 19601 USA

1-610-372-3600

Emergency telephone number (with hours of operation) : CHEMTREC +1 (800) 424-9300 (Inside the US)
CHEMTREC International +1 (703) 527-3887 (Outside the US, collect calls accepted)
Domestic Poison Control Center Customer Service +1 (800) 854-6813

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 4
SERIOUS EYE DAMAGE - Category 1
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 1
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

GHS label elements

Hazard pictograms :

Signal word : Danger