



STEEL & STAINLESS STEEL BOLLARDS



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## INTRODUCTION

### An extensive range of durable bollards

Steel and stainless steel bollards are generally based around circular or square standard tubes, with varying degrees of embellishment - from simple necks and bands, to more decorative cast caps and collars. Steel offers improved tensile strength compared with cast iron, meaning bollards are tougher and more suited to busy trafficked areas, whilst also benefiting from being lighter in weight. Heavier-walled sections steel bollards are ideal for building protection and security applications. Furnitubes offers a wide range of styles and sizes of steel-based bollards, most of which are available as standard fixed units and removable versions. We hold stock of some the more popular models, but are also able to provide a quick turnaround for items that may need to be made-to-order. Our range can be broadly categorised as follows:

#### Steel bollards

All-steel bollards are an economic choice for roadside demarcation or building protection in particular and can be supplied either in a functional plain galvanised finish or with a decorative painted / coated finish to any BS / RAL colour reference. Standard circular bollards range in size from a slimline Ø60mm up to heavy duty sections of over Ø200mm.

#### Stainless steel bollards

Stainless steel is an attractive material suited to contemporary settings. Two material grades are available - G304 suits most locations, whilst G316 is preferred for more aggressive environments such as industrial or coastal sites. Varying levels of polishing can be achieved. Stainless steel is relatively maintenance-free, requiring only an occasional clean to remove any contaminants on the surface.

#### Steel composite bollards

Composite bollards combine the structural strength of steel together with finer detailing of cast or machined caps and collars. These add-on components offer the opportunity of using contrasting materials & / or finishes to provide a generally more decorative product which tend to suit more traditional locations.



## ZENITH® BOLLARD RANGE

### The industry standard for over 15 years

Since the popular introduction of stainless steel to the street furniture market in the late 1990s, Furnitubes' Zenith range has become the benchmark of quality design and manufacture. With understated styling, Zenith bollards fit well within most contemporary settings, and in stainless steel they offer a hard-wearing, low maintenance and a 100% recyclable solution for vehicular and pedestrian traffic management purposes.

The bollard range comprises 3 basic styles of product - plain, sloped top and banded - in a range of materials, sizes and finish options, including:

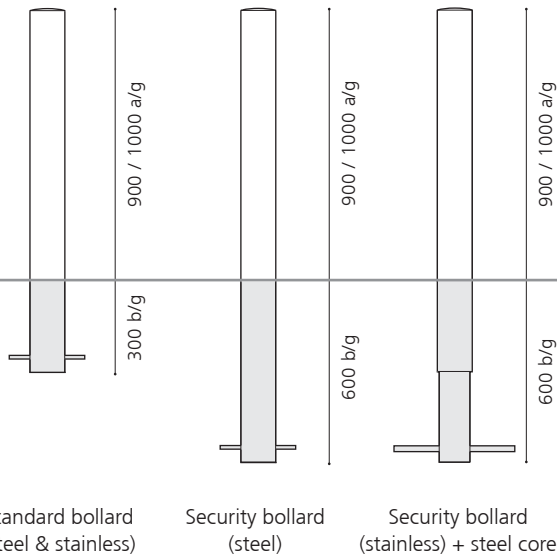
- Standard height and DDA versions
- Heavy duty security versions
- Stainless steel in grades 304 or 316 on all options
- Polished stainless steel to various finish grades
- Mild steel in galvanised finish or painted / powder coated



In addition to the extensive range of fixed bollard options, we are able to offer removable versions for situations where occasional access is required. Further adaptations available include the addition of reflective tape for improved visibility in highway and car park situations.

## ZENITH® BOLLARD RANGE

All standard Zenith bollards are available as standard in a choice of two heights - 900mm and 1000mm above ground - although other sizes are available on request. We refer to the higher options as DDA versions - 1000mm is the minimum recommended height (as set out in Disabled Access guidelines) for freestanding objects in public areas for distinction by the visually impaired. The guidelines also recommend a colour contrast on such products to further improve their visibility and we are able to offer a reflective tape in a number of colours for this purpose. Zenith security bollards are of a heavier duty construction and a greater depth below ground than standard bollards, providing a much larger concrete embedment and improved resistance to vehicular impact. Both standard and security versions of Zenith bollards can be supplied in other heights above ground and depths below ground as required for individual schemes.



**Zenith bollard standard dimensions & details**



## ZENITH® BOLLARD RANGE

### Standard bollard options

Refer to the table for individual product codes for the sizes and specifications offered as standard.

	Standard versions:		Security versions:	
A/g:	900mm	1000mm	900mm	1000mm
B/g:	300mm	300mm	600mm	600mm



#### ZENITH PLAIN

Circular bollard with shallow domed top available in stainless steel and galvanised mild steel.

Ø60mm	ZEN 706	ZEN 806	n/a	n/a
Ø76mm	ZEN 737	ZEN 837	n/a	n/a
Ø89mm	ZEN 708	ZEN 808	n/a	n/a
Ø102mm	ZEN 700	ZEN 800	n/a	n/a
Ø115mm	ZEN 701	ZEN 801	ZEN 701 SC	ZEN 801 SC
Ø140mm	ZEN 703	ZEN 803	ZEN 703 SC	ZEN 803 SC
Ø153mm*	ZEN 705	ZEN 805	ZEN 705 SC	ZEN 805 SC
Ø170mm	ZEN 702	ZEN 802	ZEN 702 SC	ZEN 802 SC
Ø204mm*	ZEN 704	ZEN 804	ZEN 704 SC	ZEN 804 SC



#### ZENITH SLOPED TOP

Circular bollard with elliptical top plate sloped at 45 degree angle, available in stainless steel and galvanised mild steel.

Ø60mm	ZEN 456	ZEN 856	n/a	n/a
Ø76mm	ZEN 457	ZEN 857	n/a	n/a
Ø89mm	ZEN 458	ZEN 858	n/a	n/a
Ø102mm	ZEN 450	ZEN 850	n/a	n/a
Ø115mm	ZEN 451	ZEN 851	ZEN 451 SC	ZEN 851 SC
Ø140mm	ZEN 453	ZEN 853	ZEN 453 SC	ZEN 853 SC
Ø153mm*	ZEN 455	ZEN 855	ZEN 455 SC	ZEN 855 SC
Ø170mm	ZEN 452	ZEN 852	ZEN 452 SC	ZEN 852 SC
Ø204mm*	ZEN 454	ZEN 854	ZEN 454 SC	ZEN 854 SC



#### ZENITH BANDED

Circular stainless steel bollard in satin polished finish with shallow domed top and two bands in bright polished finish as standard (the reverse is also available on request). Bands vary in dimension according to the bollard diameter, but generally retain the proportions as shown in this example.

Ø60mm	ZEN 726	ZEN 826	n/a	n/a
Ø76mm	ZEN 727	ZEN 827	n/a	n/a
Ø89mm	ZEN 728	ZEN 828	n/a	n/a
Ø102mm	ZEN 720	ZEN 820	n/a	n/a
Ø115mm	ZEN 721	ZEN 821	ZEN 721 SC	ZEN 821 SC
Ø140mm	ZEN 723	ZEN 823	ZEN 723 SC	ZEN 823 SC
Ø153mm*	ZEN 725	ZEN 825	ZEN 725 SC	ZEN 825 SC
Ø170mm	ZEN 722	ZEN 822	ZEN 722 SC	ZEN 822 SC
Ø204mm*	ZEN 724	ZEN 824	ZEN 724 SC	ZEN 824 SC

#### Notes:

- \* Ø153 & Ø204mm bollards are available in stainless steel only.
- Stainless steel security bollards comprise an inner core in galvanised mild steel, over which an outer sleeve in stainless steel is fitted.
- Mild steel security bollards are a single piece construction.

STANDARD SPECIFICATION:  
Grade 304 stainless steel  
Satin polished finish

OPTIONS:  
Base plated bollards  
Grade 316 stainless steel  
Stainless steel in bright polished finish  
Mild steel galvanised, self-colour or with painted / coated finish (not Banded versions)  
Reflective tape in various colours & sizes  
Removable bollards (not Security versions)



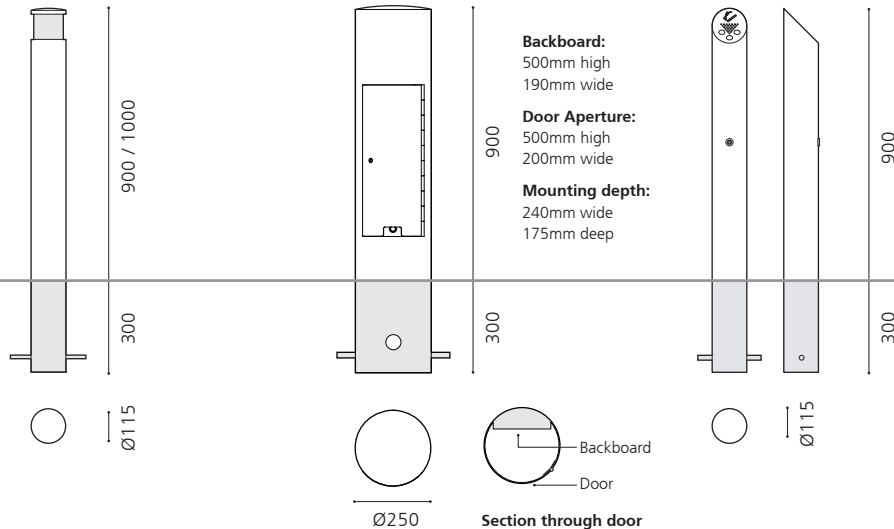
# ZENITH® BOLLARD RANGE



# ZENITH® ILLUMINATED, SERVICE & ASH WASTE BOLLARDS

## Coordinated range

In addition to fixed and removable bollards, further options are offered to provide a coordinated range of bollard-based products. The Zenith Illuminated is ideal for path edges or marking pedestrian or vehicular entry points within longer runs of standard bollards. Illumination is provided by 9 white LEDs securely fitted within an opal polycarbonate housing, and providing an output of 10.8 watts. Full details of other options - including lighting aperture sizes, louvres and LED colours - can be found on our website. The Zenith Service bollard is designed to house electricity or water supply points, most often used for street markets and other outdoor events. An internal plywood backboard is pre-fitted for mounting service connections (not supplied) and a locking door prevents unauthorised use. The bollard-based Zenith Ash Waste Container is one of a selection of cigarette bins available from Furnitubes - please refer to our website for all standard options.



### ZENITH ILLUMINATED BOLLARD

#### ZEN901 S304 9LED

900mm high, S/S G304 satin polished

#### ZEN901 DDA S304 9LED

1000mm high, S/S G304 satin polished

#### OPTIONS:

Refer to website

### ZENITH SERVICE BOLLARD

#### ZEN 707 S

900mm high, S/S G304 satin polished, with hinged & locking door and plywood backboard

#### OPTIONS:

Base plated bollard  
S/S G316 / bright polished finish

### ZENITH ASH WASTE BOLLARD

#### ZEN 210

Bolt-down, S/S G304 satin polished

#### ZEN 215

Root-fixed, S/S G304 satin polished

#### OPTIONS:

Refer to website

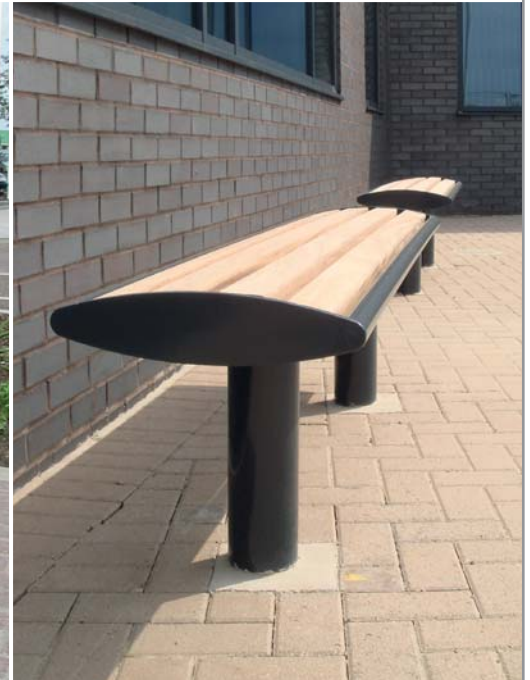




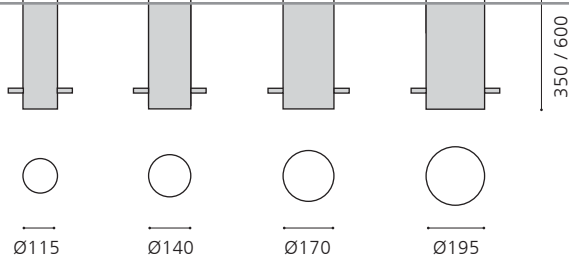
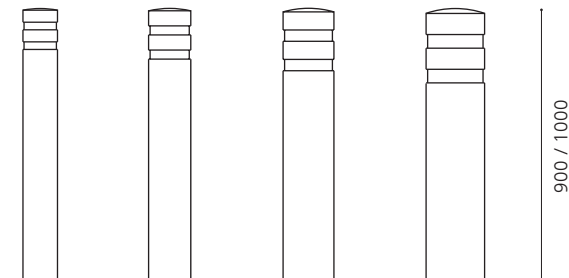
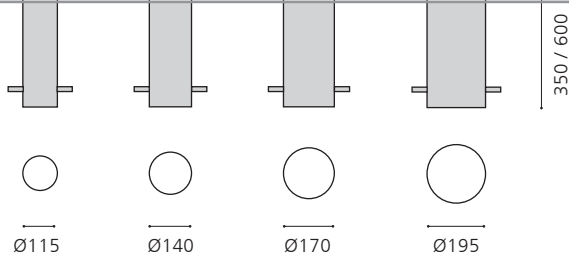
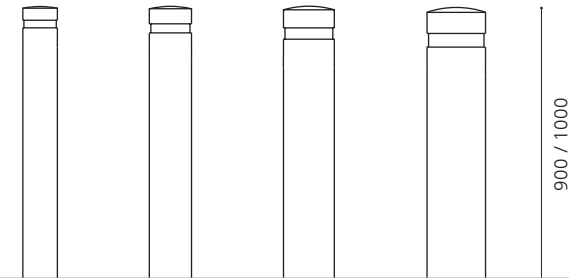
## ZENITH® EXTENDED RANGE

### Seating & litter bins

As well as bollard-based products, the Zenith range also comprises a number of seating and litter bin options that allow a coordinated range of products to be used across a scheme. The Zenith seating range includes an extensive choice of bench and full seat (with backrest) options that have been popular products in public realm projects since their introduction over a decade ago. Similarly, there are many choices of features and sizes in the Zenith litter bin range. All products are offered in stainless and mild steel. Please refer to our website for all options within the Zenith range.



# KENTON BOLLARD RANGE



## KENTON RANGE - SINGLE NECK

	Standard versions:		Security versions:	
A/g:	900mm	1000mm	900mm	1000mm
B/g:	300mm	300mm	600mm	600mm
Ø115mm	<b>KEN 111</b>	<b>KEN 311</b>	<b>KEN 111 SC</b>	<b>KEN 311 SC</b>
Ø140mm	<b>KEN 112</b>	<b>KEN 312</b>	<b>KEN 112 SC</b>	<b>KEN 312 SC</b>
Ø170mm	<b>KEN 113</b>	<b>KEN 313</b>	<b>KEN 113 SC</b>	<b>KEN 313 SC</b>
Ø195mm	<b>KEN 114</b>	<b>KEN 314</b>	<b>KEN 114 SC</b>	<b>KEN 314 SC</b>

## KENTON RANGE - DOUBLE NECK

	Standard versions:		Security versions:	
A/g:	900mm	1000mm	900mm	1000mm
B/g:	300mm	300mm	600mm	600mm
Ø115mm	<b>KEN 121</b>	<b>KEN 321</b>	<b>KEN 121 SC</b>	<b>KEN 321 SC</b>
Ø140mm	<b>KEN 122</b>	<b>KEN 322</b>	<b>KEN 122 SC</b>	<b>KEN 322 SC</b>
Ø170mm	<b>KEN 123</b>	<b>KEN 323</b>	<b>KEN 123 SC</b>	<b>KEN 323 SC</b>
Ø195mm	<b>KEN 124</b>	<b>KEN 324</b>	<b>KEN 124 SC</b>	<b>KEN 324 SC</b>

### STANDARD SPECIFICATION:

Mild steel galvanised finish

### OPTIONS:

Base plated bollards

Grade 304 or 316 stainless steel, satin or bright polished finish

Reflective tape in colour / size / positions as required

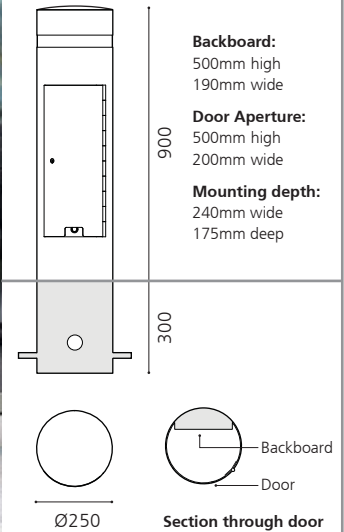
Removable bollards (not Security versions), lifting weight 25kg max



## KENTON BOLLARD RANGE

### Circular necked bollards

Kenton steel bollards are longstanding favourites from our range and are used extensively at retail parks in particular. The all-steel construction bollard is available in four different material sizes, two heights, and each with a single or double inset neck detail, which is ideal for the addition of reflective tape banding to make the bollards more visible in highway and car park situations. We refer to the taller versions as DDA bollards - 1000mm is the minimum recommended height for distinction by the visually impaired. All bollards are available as security versions - with a heavy wall material and a deeper below ground root - for use where premises are vulnerable to vehicle strikes. The Kenton range is hot dip galvanised as standard to provide the ultimate long term protection against corrosion. Decorative paint finishes can be applied on site after installation, or factory-applied by wet painting or polyester powder coating to any BS or RAL series colour reference.



### KENTON SERVICE BOLLARD

#### KEN 717 S

900mm high, S/S G304 satin polished, with hinged & locking door and plywood backboard

#### OPTIONS:

Base plated bollard  
S/S G316 / bright polished finish

### Coordinated service bollard

The Kenton Service bollard is designed to house electricity or water supply points, most often used for street markets and other outdoor events. An internal plywood backboard is pre-fitted for mounting service connections (not supplied) and a locking door prevents unauthorised use.



## HARROW BOLLARD RANGE

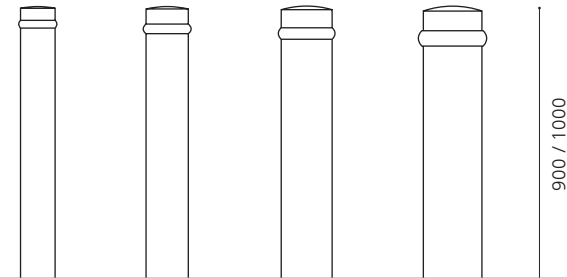
### Circular ringed bollards

The Harrow range offers a versatile choice of steel bollards suitable for many different types of locations, including highways, retail parks, educational establishments and housing developments. The addition of feature rings make the bollards more decorative than simple circular steel tubes and therefore more suited for public realm schemes. The all-steel, all-welded construction is hot dip galvanised as standard. Decorative paint finishes can be applied on site after installation, or factory-applied by wet painting or polyester powder coating to your chosen BS or RAL colour reference.

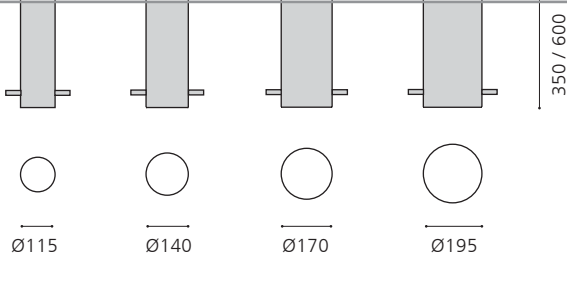
Harrow bollards are available in four diameter sizes and two heights as standard, all of which are also available as security versions - with a heavier wall material and a deeper root - for use where premises are vulnerable to vehicle strikes. We refer to the taller versions as DDA bollards - 1000mm is the minimum recommended height (as set out in Disabled Access guidelines) for freestanding objects in public areas for distinction by the visually impaired. On the double banded versions reflective tape can be fitted between the bands to improve their visibility.



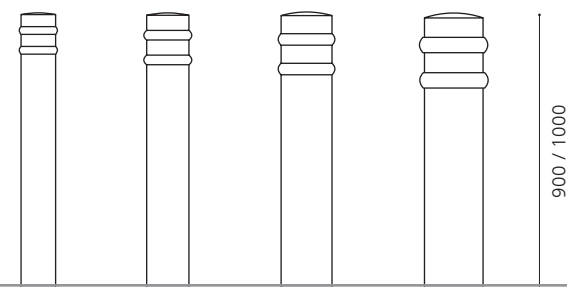
# HARROW BOLLARD RANGE



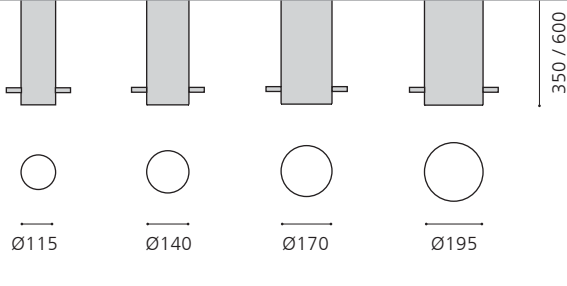
900 / 1000



350 / 600



900 / 1000



350 / 600

## HARROW RANGE - SINGLE RING

	Standard versions:		Security versions:	
A/g:	900mm	1000mm	900mm	1000mm
B/g:	300mm	300mm	600mm	600mm
Ø115mm	<b>HAR 211</b>	<b>HAR 311</b>	<b>HAR 211 SC</b>	<b>HAR 311 SC</b>
Ø140mm	<b>HAR 212</b>	<b>HAR 312</b>	<b>HAR 212 SC</b>	<b>HAR 312 SC</b>
Ø170mm	<b>HAR 213</b>	<b>HAR 313</b>	<b>HAR 213 SC</b>	<b>HAR 313 SC</b>
Ø195mm	<b>HAR 214</b>	<b>HAR 314</b>	<b>HAR 214 SC</b>	<b>HAR 314 SC</b>

## HARROW RANGE - DOUBLE RING

	Standard versions:		Security versions:	
A/g:	900mm	1000mm	900mm	1000mm
B/g:	300mm	300mm	600mm	600mm
Ø115mm	<b>HAR 221</b>	<b>HAR 321</b>	<b>HAR 221 SC</b>	<b>HAR 321 SC</b>
Ø140mm	<b>HAR 222</b>	<b>HAR 322</b>	<b>HAR 222 SC</b>	<b>HAR 322 SC</b>
Ø170mm	<b>HAR 223</b>	<b>HAR 323</b>	<b>HAR 223 SC</b>	<b>HAR 323 SC</b>
Ø195mm	<b>HAR 224</b>	<b>HAR 324</b>	<b>HAR 224 SC</b>	<b>HAR 324 SC</b>

### STANDARD SPECIFICATION:

Mild steel galvanised finish

### OPTIONS:

- Base plated bollards
- Grade 304 or 316 stainless steel, satin or bright polished finish
- Reflective tape in colour / size / positions as required
- Removable bollards (not Security versions), lifting weight 25kg max



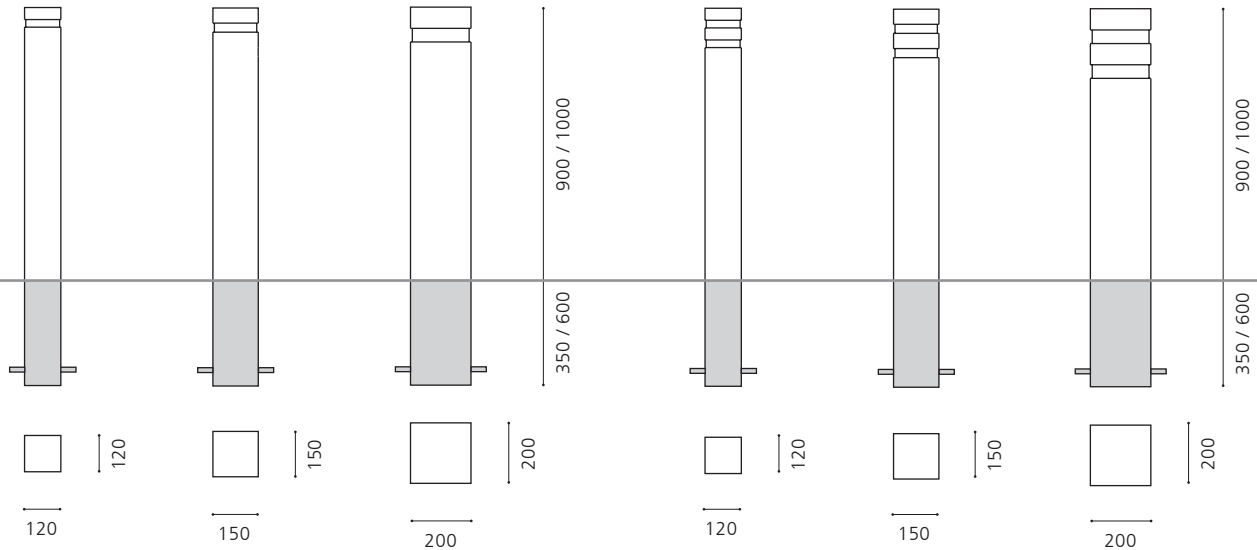
## ALPERTON BOLLARD RANGE

### Square necked bollards

The minimal and clean design of the Alperton makes these bollards a popular choice for contemporary developments in particular. Manufactured from box section steel and hot dip galvanised as standard, the bollards offer a robust and resilient solution for delineating spaces and discouraging vehicular overrun into pedestrian areas. The range comprises three sectional sizes, all of which are available in heavy wall security versions, and with the option of a single or double necked feature. The necked sections are ideal for the application of reflective tape banding to make the bollards more visible in highway and car park situations. Standard bollards are available in two heights; we refer to the taller versions as a DDA bollard - 1000mm height is the minimum recommendation (as set out in Disabled Access guidelines) for freestanding objects in public areas for distinction by the visually impaired. Hot dipped galvanising is standard. Decorative paint finishes can be applied on site after installation, or factory-applied by wet painting or polyester powder coating to your chosen BS or RAL colour reference.



# ALPERTON BOLLARD RANGE



## ALPERTON RANGE - SINGLE NECK

### Standard versions:

A/g:	900mm	1000mm
B/g:	300mm	300mm
120 x 120mm	<b>ALP 311</b>	<b>ALP 511</b>
150 x 150mm	<b>ALP 312</b>	<b>ALP 512</b>
200 x 200mm	<b>ALP 313</b>	<b>ALP 513</b>

### Security versions:

900mm	1000mm
600mm	600mm
<b>ALP 311 SC</b>	<b>ALP 511 SC</b>
<b>ALP 312 SC</b>	<b>ALP 512 SC</b>
<b>ALP 313 SC</b>	<b>ALP 513 SC</b>

## ALPERTON RANGE - DOUBLE NECK

### Standard versions:

A/g:	900mm	1000mm
B/g:	300mm	300mm
120 x 120mm	<b>ALP 321</b>	<b>ALP 521</b>
150 x 150mm	<b>ALP 322</b>	<b>ALP 522</b>
200 x 200mm	<b>ALP 323</b>	<b>ALP 523</b>

### Security versions:

900mm	1000mm
600mm	600mm
<b>ALP 321 SC</b>	<b>ALP 521 SC</b>
<b>ALP 322 SC</b>	<b>ALP 522 SC</b>
<b>ALP 323 SC</b>	<b>ALP 523 SC</b>

### STANDARD SPECIFICATION:

Mild steel galvanised finish

### OPTIONS:

- Base plated bollards
- Grade 304 or 316 stainless steel, satin or bright polished finish
- Reflective tape in colour / size / positions as required
- Removable bollards (not Security versions), lifting weight 25kg max

## SUDBURY BOLLARD RANGE



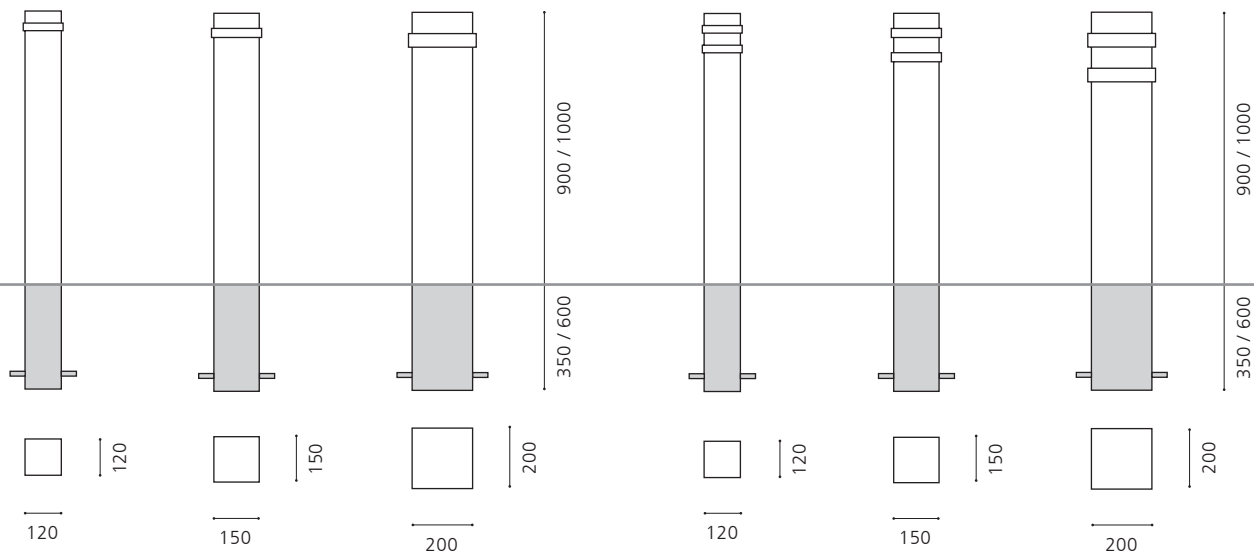
### Square ringed bollards

The square form of the Sudbury range of bollards offers a stronger visual statement and more imposing obstacle compared with the circular equivalent Harrow range. As such, Sudbury bollards are most often employed in areas that are vulnerable to overrun by large vehicles - at road junctions and on traffic islands in particular. All products within the range are manufactured from robust box section steel and hot dip galvanised as standard to provide the ultimate protection against corrosion. Decorative paint finishes can be applied on site after installation, or factory-applied by wet painting or polyester powder coating to any BS or RAL colour reference.

The Sudbury range comprises three sectional sizes and two heights as standard, each with single or double ring features, and with the further option of heavy wall security versions for all sizes. We refer to the taller versions as DDA bollards - 1000mm is the minimum recommended height (as set out in Disabled Access guidelines) for freestanding objects in public areas for distinction by the visually impaired. Gaps between the bands on the double banded options are ideal for the application of reflective tape banding to make the bollards more visible for highway and car park applications.



## SUDBURY BOLLARD RANGE



### SUDBURY RANGE - SINGLE RING

#### Standard versions:

A/g:	900mm	1000mm
B/g:	300mm	300mm
120 x 120mm	<b>SUD 411</b>	<b>SUD 511</b>
150 x 150mm	<b>SUD 412</b>	<b>SUD 512</b>
200 x 200mm	<b>SUD 413</b>	<b>SUD 513</b>

#### Security versions:

900mm	1000mm
600mm	600mm
<b>SUD 411 SC</b>	<b>SUD 511 SC</b>
<b>SUD 412 SC</b>	<b>SUD 512 SC</b>
<b>SUD 413 SC</b>	<b>SUD 513 SC</b>

### SUDBURY RANGE - DOUBLE RING

#### Standard versions:

A/g:	900mm	1000mm
B/g:	300mm	300mm
120 x 120mm	<b>SUD 421</b>	<b>SUD 521</b>
150 x 150mm	<b>SUD 422</b>	<b>SUD 522</b>
200 x 200mm	<b>SUD 423</b>	<b>SUD 523</b>

#### Security versions:

900mm	1000mm
600mm	600mm
<b>SUD 421 SC</b>	<b>SUD 521 SC</b>
<b>SUD 422 SC</b>	<b>SUD 522 SC</b>
<b>SUD 423 SC</b>	<b>SUD 523 SC</b>

#### STANDARD SPECIFICATION:

Mild steel galvanised finish

#### OPTIONS:

Base plated bollards

Grade 304 or 316 stainless steel, satin or bright polished finish

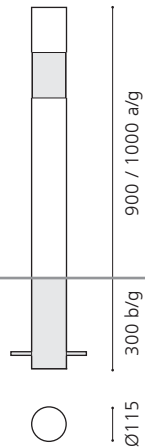
Reflective tape in colour / size / positions as required

Removable bollards (not Security versions), lifting weight 25kg max

## TRANSPORT SS BOLLARD

### Purpose-designed highways bollard

The Transport SS bollard has been specifically designed for use on London's arterial and local roads, to provide a robust and highly visible roadside feature. Available in stainless steel and mild steel, both versions have a machined recess into which Class 1 reflective vinyl is fitted as standard. This colour-fast material is highly resistant to corrosion and weather, has excellent adhesion properties and is less vulnerable to physical wear as a result of being slightly inset from the main face of the bollard.



### TRANSPORT SS

#### TRL 700

900mm high, S/S G304, satin polished finish with black reflective tape band

#### TRL 800

1000mm high, S/S G304, satin polished finish with black reflective tape band

#### OPTIONS:

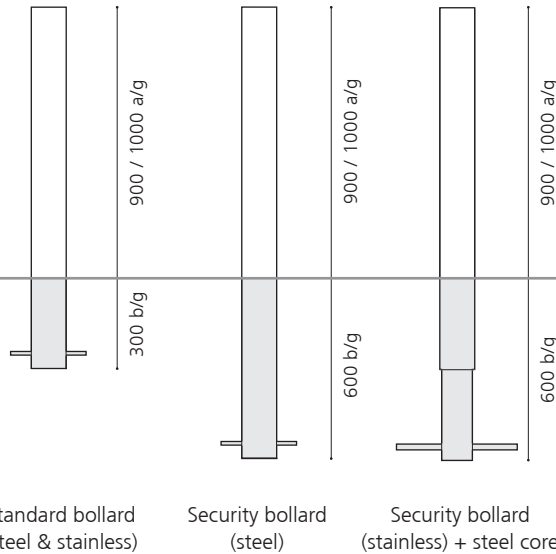
- Bright polished finish
- Grade 316 stainless steel
- Mild steel galvanised, self-colour or with painted / coated finish
- Reflective tape in red, white, yellow, blue, orange and green
- Removable bollard
- Base plated bollards

The Transport SS bollard is available in two height options - 900mm and 1000mm above ground. The taller version is the minimum recommended height (as set out in Disabled Access guidelines) for freestanding objects in public areas for distinction by the visually impaired. Use of an appropriate colour of reflective tape will ensure that both versions comply with the recommendations for colour contrast to further improve their visibility.

## STIRLING BOLLARD RANGE

### Simple-form range of budget bollards

The Stirling is our most competitively priced range of steel and stainless steel bollards, ideal for schemes where cost is the primary consideration. These simplified versions of the Zenith range equivalents - circular section bollards with a flat rather than domed top plate - are available in a comprehensive range of materials, finishes and sizes, and as removable versions to allow for occasional vehicular access. Larger sized bollards are also available in heavy duty security versions for improved performance for use in areas vulnerable to vehicle strikes.



Stirling bollard standard dimensions & details

#### Notes:

- \* Ø102mm security bollards are available in mild steel only.
- \*\* Ø153 & Ø195mm bollards are available in mild steel only.
- On mild steel bollards small galvanising vent holes are located on the side of the bollard just beneath the top plate, which are left unfilled on this range. There are no such holes on stainless steel versions of the product.

### STIRLING RANGE

	Standard versions:		Security versions:	
A/g:	900mm	1000mm	900mm	1000mm
B/g:	300mm	300mm	600mm	600mm
Ø60mm	<b>STL 706</b>	<b>STL 806</b>	n/a	n/a
Ø76mm	<b>STL 737</b>	<b>STL 837</b>	n/a	n/a
Ø89mm	<b>STL 708</b>	<b>STL 808</b>	n/a	n/a
Ø102mm	<b>STL 700</b>	<b>STL 800</b>	<b>STL 700 SC*</b>	<b>STL 800 SC*</b>
Ø115mm	<b>STL 701</b>	<b>STL 801</b>	<b>STL 701 SC</b>	<b>STL 801 SC</b>
Ø140mm	<b>STL 703</b>	<b>STL 803</b>	<b>STL 703 SC</b>	<b>STL 803 SC</b>
Ø153mm**	<b>STL 705</b>	<b>STL 805</b>	<b>STL 705 SC</b>	<b>STL 805 SC</b>
Ø170mm	<b>STL 702</b>	<b>STL 802</b>	<b>STL 702 SC</b>	<b>STL 802 SC</b>
Ø195mm**	<b>STL 704</b>	<b>STL 804</b>	<b>STL 704 SC</b>	<b>STL 804 SC</b>

#### STANDARD SPECIFICATION:

Mild steel galvanised finish

#### OPTIONS:

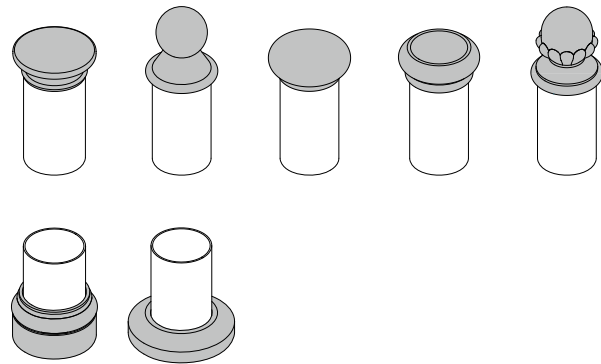
- Painted / coated finish
- Stainless steel G304 / G306, satin or bright polished (Security versions in stainless steel include a heavy duty galvanised mild steel core)
- Reflective tape in colour / size / positions as required
- Removable bollard (not Security versions)
- Base plated bollards



## LINX 100 & 200 BOLLARD RANGES

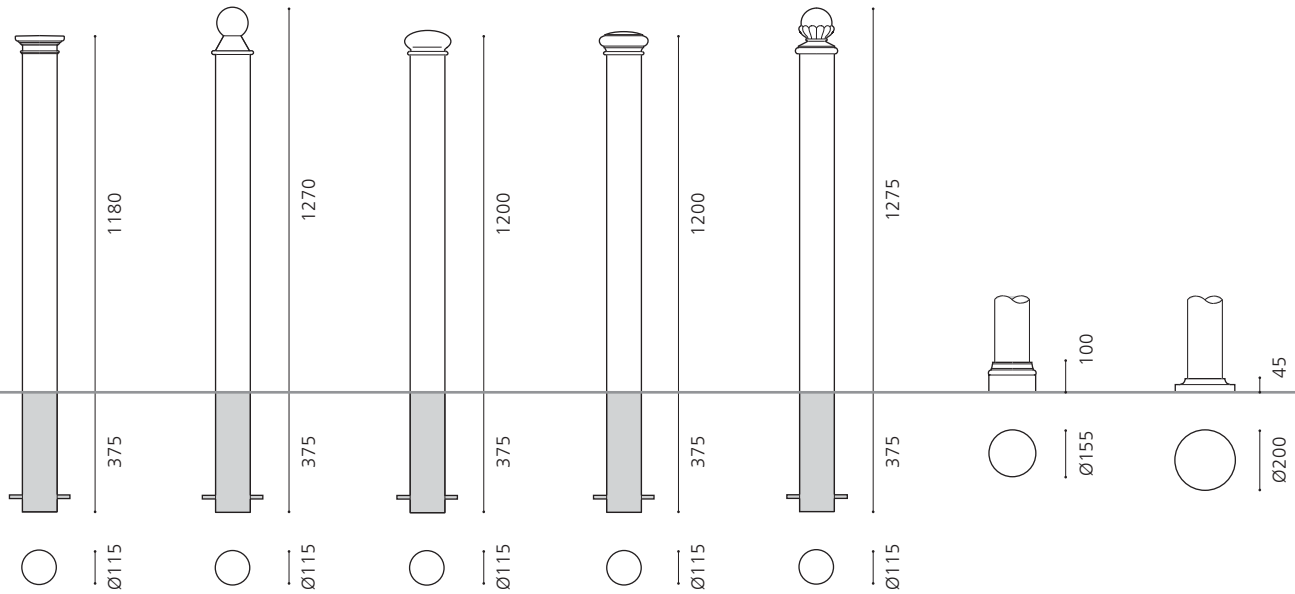
### Decorative bollards with cast caps & collars

The Linx 100 and 200 bollard ranges are derived from and are complimentary products to Furnitubes' patented Linx Guardrail System. The bollards comprise cast iron embellishments fitted to steel or stainless steel posts - this composite construction combines the benefits of the strength of steel and the decorative qualities of the castings, whilst also providing economic bollard solutions. The 100 range is based on a  $\varnothing 115\text{mm}$  steel tube, and the 200 range on a  $\varnothing 75\text{mm}$  tube.



Both the Linx 100 and 200 bollard ranges are available with a choice of 5 cap styles and 2 optional base collars. The height of the base collars can be adjusted on the post to allow for variations in installation depths and also serve to cover any ragged edges to the paving around the base of the post. Caps and collars can be painted in the same or a contrasting colour to the post.

## LINX 100 BOLLARD RANGE



### LINX 100 BOLLARDS

#### EUSTON

#### LEB 100

Steel / iron bollard

#### TRAFFORD

#### LTB 100

Steel / iron bollard

#### ASHTON

#### LAB 100

Steel / iron bollard

#### HALE

#### LHB 100

Steel / iron bollard

#### KNIGHTSBRIDGE

#### LKB 100

Steel / iron bollard

### LINX 100 BOLLARD COLLARS

#### EUSTON

#### EB 100

Cast iron collar

#### TRAFFORD

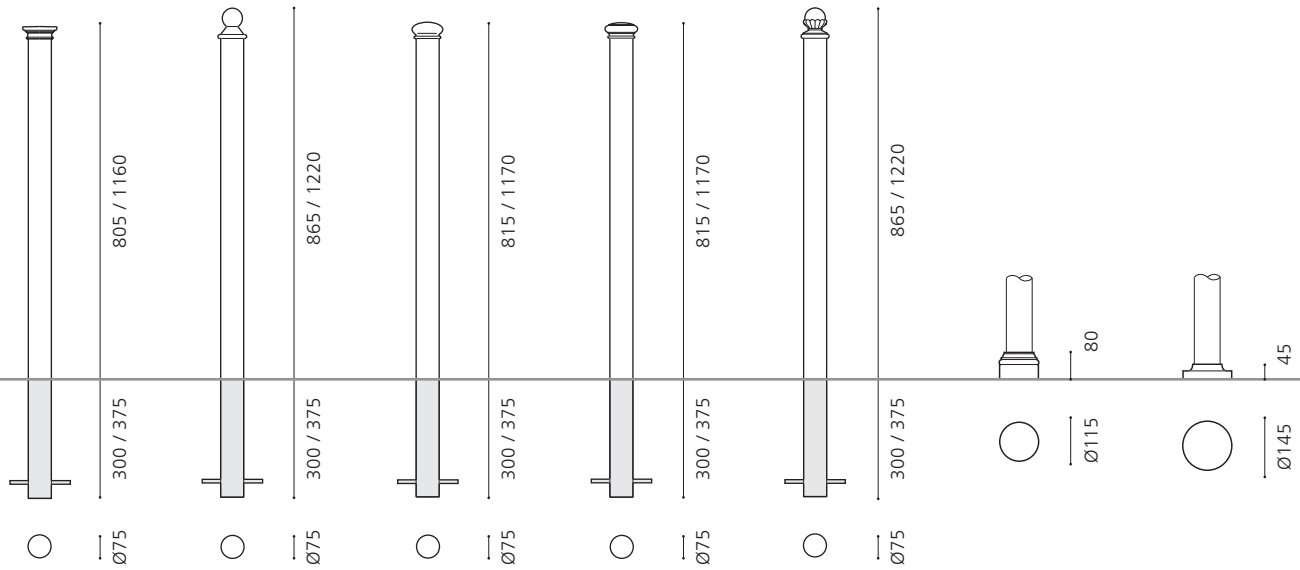
#### TB 100

Cast iron collar

STANDARD SPECIFICATION:  
 Posts in mild steel, galvanised  
 Caps in cast iron  
 Bollard assembly in painted finish

OPTIONS:  
 Base collars  
 Stainless steel post, various grades and finishes  
 Removable bollards, lifting weights approx 25kg max

## LINX 200 BOLLARD RANGE



### LINX 200 BOLLARDS

#### EUSTON

Steel / iron bollard

#### LEB 200

1160mm / 375mm

#### LEM 200

805mm / 300mm

#### TRAFFORD

Steel / iron bollard

#### LTB 200

1220mm / 375mm

#### LTM 200

865mm / 300mm

#### ASHTON

Steel / iron bollard

#### LAB 200

1170mm / 375mm

#### LAM 200

815mm / 300mm

#### HALE

Steel / iron bollard

#### LHB 200

1170mm / 375mm

#### LHM 200

815mm / 300mm

#### KNIGHTSBRIDGE

Steel / iron bollard

#### LKB 200

1220mm / 375mm

#### LKM 200

865mm / 300mm

### LINX 200 BOLLARD COLLARS

#### EUSTON

#### EB 200

Cast iron collar

#### TRAFFORD

#### TB 200

Cast iron collar

#### STANDARD SPECIFICATION:

Posts in mild steel, galvanised  
Caps in cast iron  
Bollard assembly in painted finish

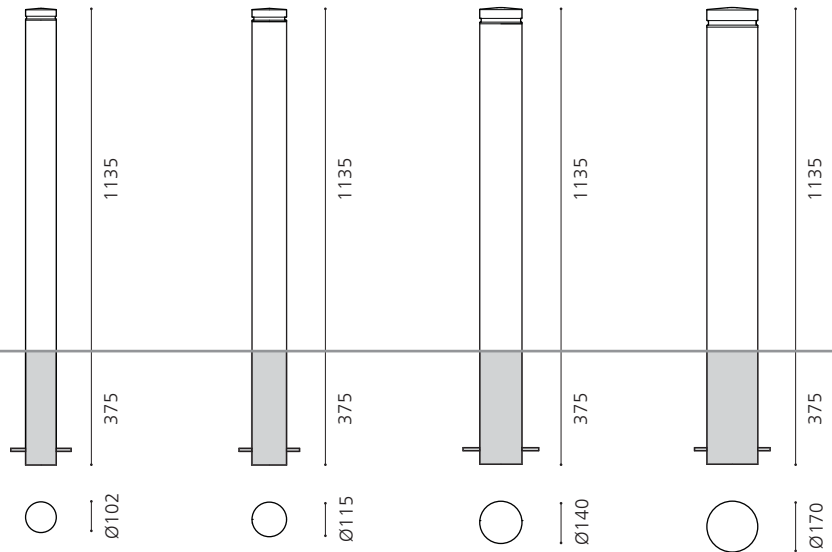
#### OPTIONS:

Base collars  
Stainless steel post, various grades and finishes  
Removable bollards, lifting weights approx 25kg max

## LINX 400 BOLLARD RANGE

### Contemporary-styled composite bollards

The precision-machined 'Kenton' stainless steel cap is the distinctive feature of the Linx 400 range - the most recent addition to the Linx family. The cap is fitted to a galvanised finish mild steel post as standard, although it can be painted / coated or supplied in all-stainless steel if preferred. Four standard diameters of bollards are available, all supplied at 1135mm above ground height as standard, although other diameters and heights can be supplied.



### LINX 400 BOLLARD RANGE

#### LNB 400

Mild steel galv post  
& S/S G304 cap

#### LNB 100

Mild steel galv post  
& S/S G304 cap

#### LNB 500

Mild steel galv post  
& S/S G304 cap

#### LNB 700

Mild steel galv post  
& S/S G304 cap

#### OPTIONS:

Painted / coated post

Stainless steel post, G304 or G316 in satin or bright polished finish

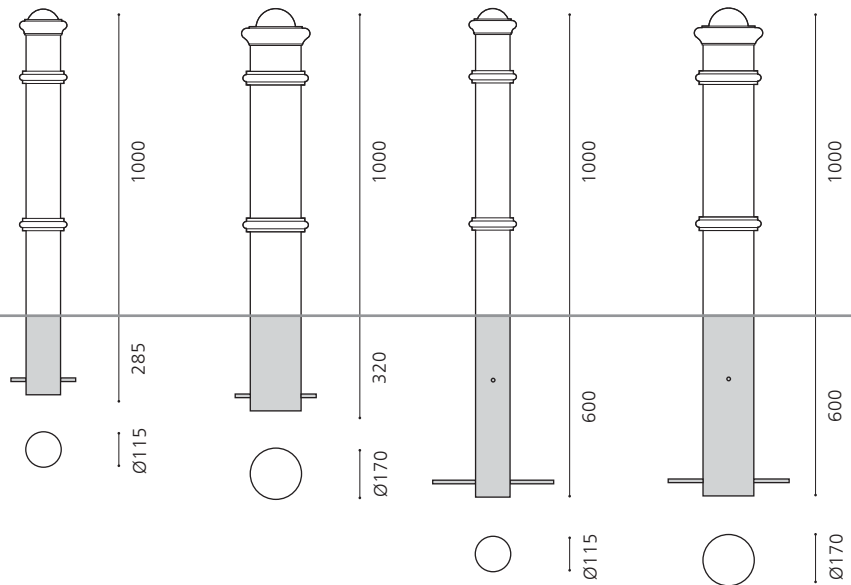
Base plated bollards

Removable bollards, lifting weights approx 25kg max

## HOLBORN BOLLARD RANGE

### Cannon-style composite bollards

Holborn bollards are a steel / cast iron composite construction designed to replicate our traditional Cannon cast iron bollard. Manufactured from a steel tube with a decorative cast iron cap and collars, the Holborn is much lighter in weight than the Cannon equivalent, but also offers greater strength and is therefore well suited to highly trafficked areas where there is a risk of impact damage. Holborn bollards are available in two sizes - Ø115mm and Ø170mm - both in a standard specification and a heavy duty security versions featuring a longer root for deeper embedment. The steel shaft of the bollard is galvanised prior to application of primer and topcoats.



#### HOLBORN

**HOL 510**  
Steel / iron bollard

OPTIONS:  
Base plated bollard  
Removable bollard,  
lifting weight: 22kg

#### HOLBORN MAJOR

**HOL 520**  
Steel / iron bollard

OPTIONS:  
Base plated bollard  
Removable bollard,  
lifting weight: 40kg

#### HOLBORN SECURITY

**HOL 510 SC**  
Steel / iron bollard

#### HOLBORN MAJOR SECURITY

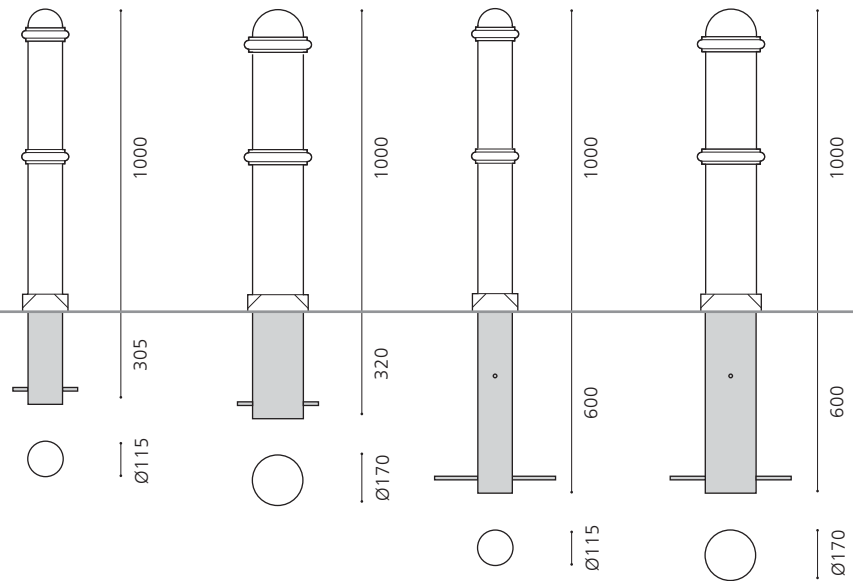
**HOL 520 SC**  
Steel / iron bollard



## SALISBURY BOLLARD RANGE

### Warminster-style composite bollards

Salisbury bollards are steel / cast iron composite assemblies designed to replicate our traditional Warminster range of cast iron bollards. Manufactured from a steel tube with a decorative cast iron cap, mid ring and base collar, the Salisbury is lighter than the Warminster equivalents, whilst also offering greater strength and is well suited to trafficked areas where there is a high risk of vehicular impact. Salisbury bollards are available in two sizes - Ø115mm and Ø170mm - both in a standard specification and a heavy duty security versions featuring a longer root for deeper embedment. The steel shaft of the bollard is galvanised prior to application of primer and topcoats.



#### SALISBURY

##### SAL 530

Steel / iron bollard

##### OPTIONS:

Base plated bollard  
Removable bollard,  
lifting weight: 22kg

#### SALISBURY MAJOR

##### SAL 540

Steel / iron bollard

##### OPTIONS:

Base plated bollard  
Removable bollard,  
lifting weight: 40kg

#### SALISBURY SECURITY

##### SAL 530 SC

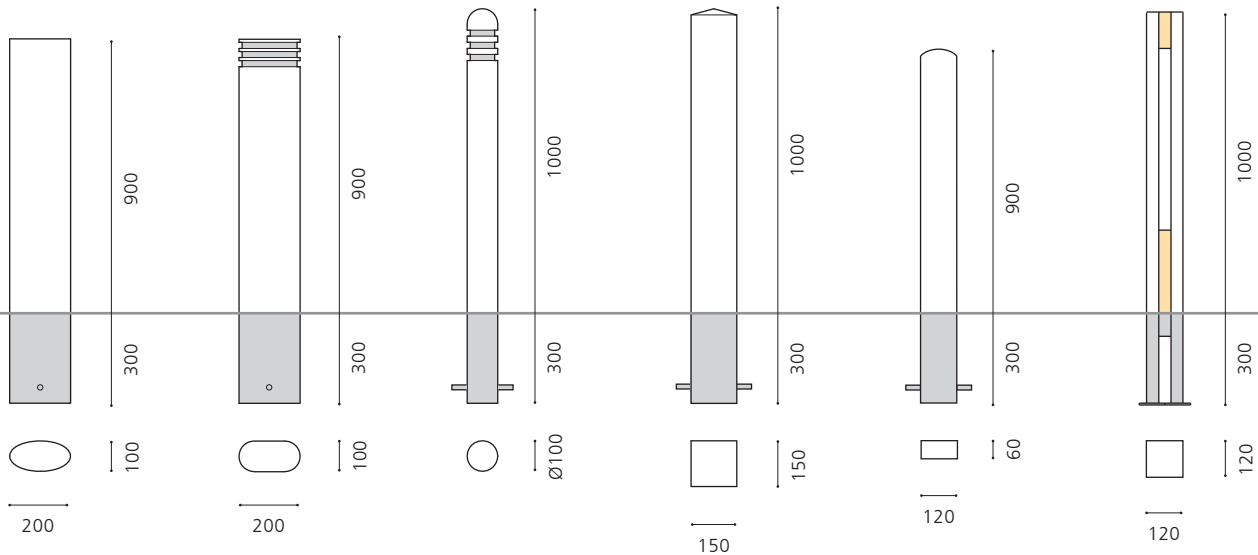
Steel / iron bollard

#### SALISBURY MAJOR SECURITY

##### SAL 540 SC

Steel / iron bollard

# STAINLESS STEEL BOLLARDS



## OVAL

### OVA 712 S

G304 S/S satin polished

OPTIONS:  
Bright polished  
G316 S/S

## DECO

### DEC 712 S RT

G304 S/S satin polished

OPTIONS:  
Red/white/yellow bands  
Bright polished  
G316 S/S

## ALPINE

### ALP 700

G304 S/S satin polished

OPTIONS:  
Red/white/yellow bands  
Removable bollard  
Bright polished  
G316 S/S

## ELTHAM

### ELT 715 S

G304 S/S satin polished

OPTIONS:  
Base plated bollard  
Removable bollard  
Bright polished  
G316 S/S

## MILLENNIUM

### MIL 701 B S

G304 S/S satin polished

OPTIONS:  
Base plated bollard  
Removable bollard  
Bright polished  
G316 S/S

## HARBOUR

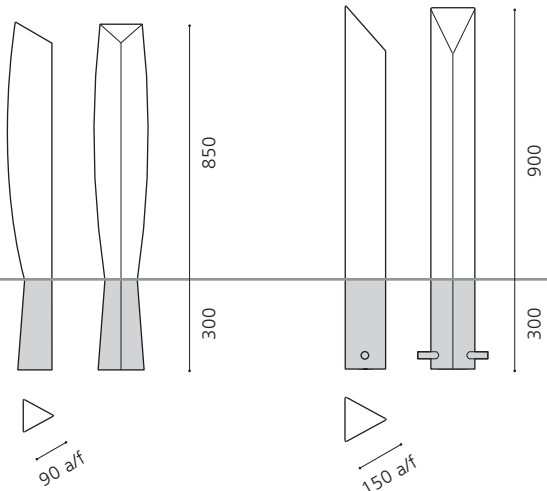
### HBR 440 B304

G304 S/S satin polished  
with iroko inserts

OPTIONS:  
Base plated bollard  
Bright polished  
G316 S/S



## STAINLESS STEEL BOLLARDS



### Variations & specials

Being fabricated from cut and formed lengths of steel tube and other sections, many of our standard steel and stainless steel bollards can be readily supplied in other heights and can also be adapted for other purposes, to form sign posts, cycle stands and barriers etc. Unlike with cast iron bollards - which require a costly pattern for any new design - bespoke fabricated bollards can generally be manufactured at competitive rates, even for small quantities. As well as our standard range of finishes for mild steel and stainless steel products we are also happy to consider any specialist coating that you may require for a specific site. Please contact our Sales or Design departments to discuss your requirement for variations to standard products and specials.

#### WHARF

##### WHA 452 S

G304 S/S satin polished

##### OPTIONS:

Base plated bollard  
Removable bollard  
Bright polished  
G316 S/S

#### PINNACLE

##### PIN 452 S

G304 S/S satin polished

##### OPTIONS:

Base plated bollard  
Removable bollard  
Bright polished  
G316 S/S



## STEEL & STAINLESS STEEL REMOVABLE BOLLARDS

### Removable bollards

Within a continuous line of fixed bollards there is often a requirement for a number of removable bollards to allow for occasional vehicular access. Most of our steel and stainless steel bollards are available as removable versions.

We offer two types of removable bollards - for use with **Standard** or **F1 Series** sockets - the features and operation of which should be considered in detail to determine which is the most suitable product for your application.

### Standard sockets

- Simple economic solution using galvanised mild steel socket
- Ease of operation is convenient for situations where bollard needs to be removed quickly and / or frequently, such as emergency access routes
- Hasp fitted to bollard passes through slot in socket hinge plate for locking with an FB14 padlock (please order separately) or similar
- Hinged cover plate sits flush to finished ground level when closed but is not designed to be driven over - therefore most suited to short term removal situations
- Bollard, socket and padlock only - no further loose parts
- Loose fit of square bollard spigot locating in circular socket means bollard is not 100% rigid (but can't be removed if locked)



### F1 series sockets

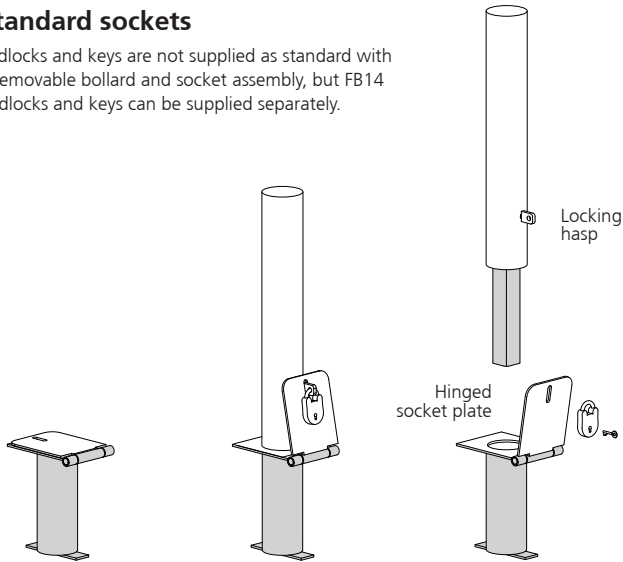
- Neat flush-fitting solution constructed in heavy duty cast iron, steel and hard-wearing plastics
- Takes longer (than standard socket) to insert / remove bollard, so may not be suitable for emergency vehicular routes or when bollard needs to be removed frequently
- Circular bollard (or welded on circular spigot for large diameter circular bollards and other shapes, such as square) locates in circular socket with locking bolts to fully rigidify the bollard
- Separate plug supplied for inserting into socket when bollard is removed
- Socket designed and tested to withstand vehicular over-run up to 12.5 tonnes point loading



# STEEL & STAINLESS STEEL REMOVABLE BOLLARDS

## Standard sockets

Padlocks and keys are not supplied as standard with a removable bollard and socket assembly, but FB14 padlocks and keys can be supplied separately.



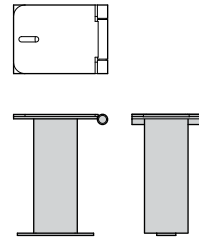
Closed socket

Secured bollard

Bollard removal

### Operation

The base of the socket should be cleared of any build up of debris which could prevent the bollard spigot from being inserted to its full depth. Fold back the hinge plate and insert the bollard into the open socket in the orientation shown, rotate the plate over the locking hasp and secure with a padlock (please order separately). On removing the bollard, check there is no debris on the top face of the socket before lowering the hinge plate into the closed position. If installed correctly, the plate will be flush with the surrounding paving so as not to present a trip hazard. Socket hinges should be lubricated regularly to ensure continued smooth operation.

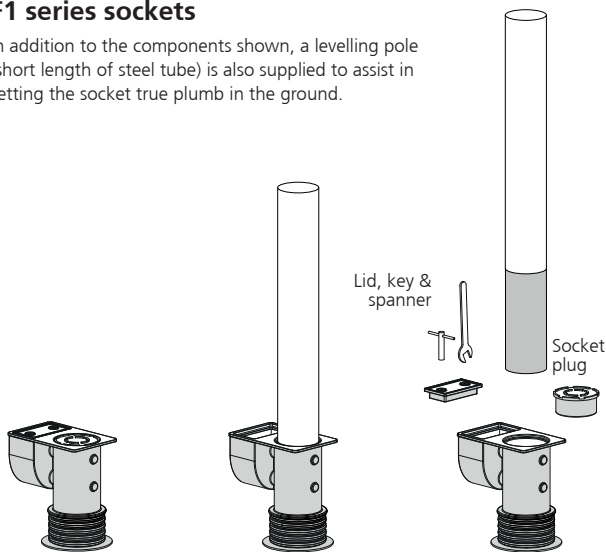


### Dimensions

The plan dimensions of the socket hinge plate depend on the bollard type, size & shape at ground level - if these dimensions are important to you please contact us for details. For all sockets, the below ground socket root is typically 320mm deep.

## F1 series sockets

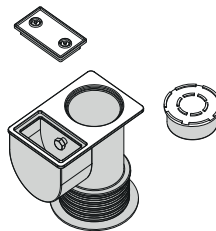
In addition to the components shown, a levelling pole (short length of steel tube) is also supplied to assist in setting the socket true plumb in the ground.



Closed socket

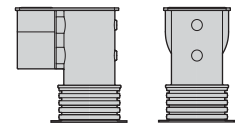
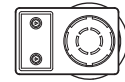
Secured bollard

Bollard removal



### Operation

Insert the bollard / spigot into the open socket and tighten 2no. bolts in the locking chamber (spanner supplied) onto the sides of the root / spigot. Place and lock the lid on the locking chamber. When the bollard is removed insert the plug into the socket and secure with the same bolts. The socket should be flush with the ground if installed correctly.



### Dimensions

The plan dimensions of the socket depend on the bollard type, size & shape at ground level - if these dimensions are important to you please contact us for details. For all sockets, the below ground socket root is typically 300mm deep.

# STEEL & STAINLESS STEEL BOLLARDS - SPECIFICATION & INSTALLATION

## General specification

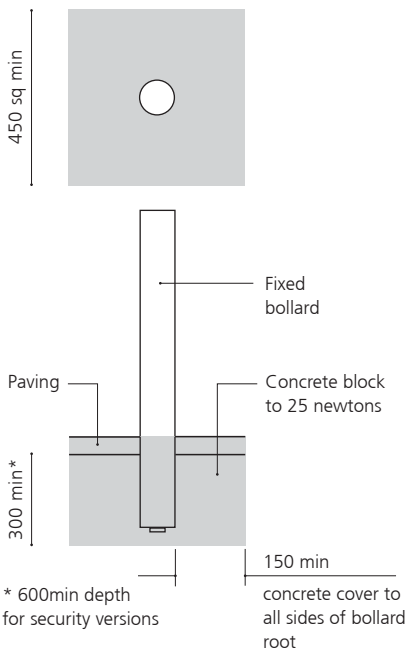
Mild steel bollards are generally supplied with a hot dip galvanised coating for long-lasting protection, with the option of an additional wet-painted or polyester powder coated decorative finish. Other more specialist coatings - such as nylon and other plastic coating systems - can be supplied on special request. Stainless steel products are supplied in either grade 304, which is suitable for most exterior situations, or grade 316 for more aggressive environments such as coastal or industrial locations. Satin or bright polishing are the standard finishes offered.

## Installation details

It is important that bollards have a suitable foundation so that they remain firmly in place if they are knocked at any time. Shown below are the minimum recommended requirements for concrete foundation block for fixed and removable bollards in a typical installation in normal ground conditions. Particular attention should be paid to the following:

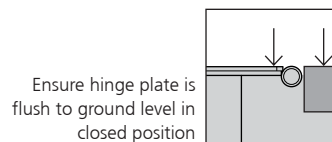
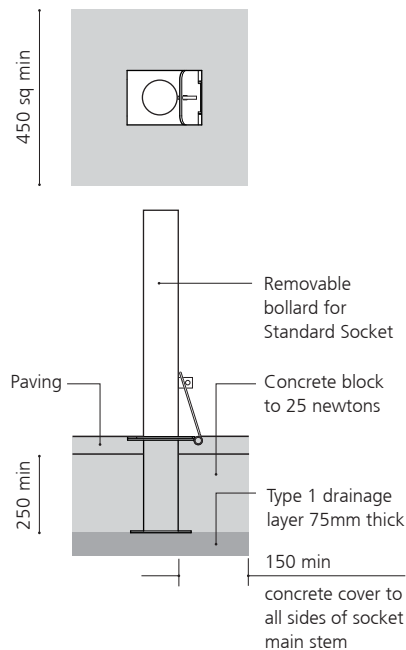
- Set the bollard at the depth / height as shown in the specific bollard illustration
- Ensure concrete penetrates through the below-ground apertures (where applicable) into the internal void of the bollard up to ground level

### FIXED BOLLARD

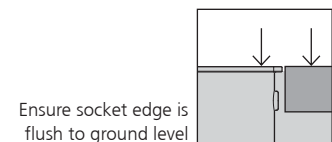
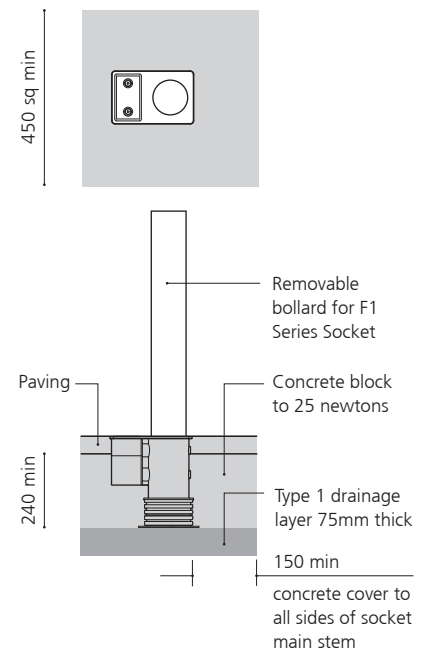


The professional advice of a highway / civil engineer should be sought if there are any queries regarding the ground conditions or doubts over the suitability of the foundation.

### REMOVABLE BOLLARD: STD SOCKET



### REMOVABLE BOLLARD: F1 SERIES SOCKET



# STEEL & STAINLESS STEEL BOLLARDS



## STEEL & STAINLESS STEEL BOLLARDS



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