

STEEL & STAINLESS STEEL BOLLARDS







### 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 demarkation 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.







**© Furnitubes** Ref: S-124-02-16

tel: 020 8378 3200

### 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.

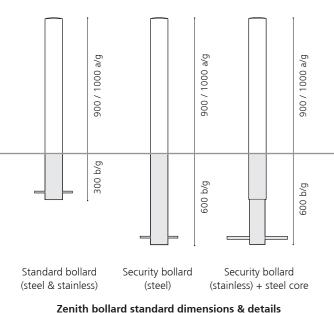
© Furnitubes Ref: S-125-03-17



### 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 embeddment 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.







www.furnitubes.com



tel: 020 8378 3200

### ZENITH® BOLLARD RANGE

A/g:

B/g:

### Standard bollard options

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



### ZENITH PLAIN

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

060mm	ZEN 706	ZEN 806
76mm	ZEN 737	ZEN 837
089mm	ZEN 708	ZEN 808
0102mm	ZEN 700	ZEN 800
)115mm	ZEN 701	ZEN 801
0140mm	ZEN 703	ZEN 803
)153mm*	ZEN 705	ZEN 805
0170mm	ZEN 702	ZEN 802

900mm

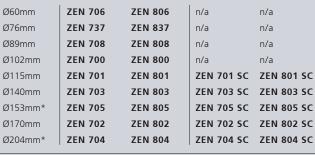
300mm

Standard versions:

Security versions: 900mm

600mm

1000mm 600mm



1000mm

300mm



### ZENITH SLOPED TOP

Circular bollard with eliptical 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



### **7FNITH 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
Ø76mm	ZEN 727	ZEN 827
Ø89mm	ZEN 728	ZEN 828
Ø102mm	ZEN 720	ZEN 820
Ø115mm	ZEN 721	ZEN 821
Ø140mm	ZEN 723	ZEN 823
Ø153mm*	ZEN 725	ZEN 825
Ø170mm	ZEN 722	ZEN 822
Ø204mm*	ZEN 724	ZEN 824

n/a n/a n/a n/a n/a n/a n/a ZEN 721 SC ZEN 821 SC ZEN 723 SC ZEN 823 SC ZEN 725 SC ZEN 825 SC 7FN 722 SC 7FN 822 SC

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:

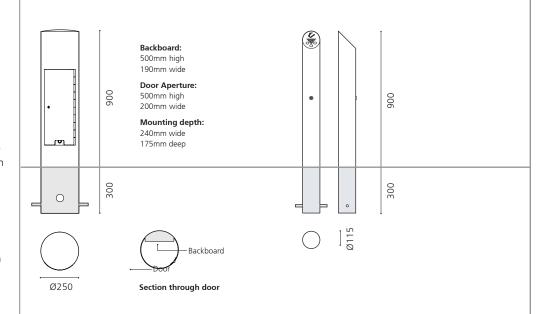
Base plated bollards Grade 316 stainless steel Stainless steel in bright polished finish Mild steel galvanised, self-colour or with painted / coated finish (not Banded versions) Reflective tape in various colours & sizes Removable bollards (not Security versions)

### ZENITH®BOLLARD RANGE



© Furnitubes Ref: S-128-02-16

In addition to fixed and removable bollards. further options are offered to provide a coordinated range of bollard-based products. 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 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









© Furnitubes Ref: S-129-03-19

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

### 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.



## FURNITURE (CARLANGE AND ASSESSMENT)

### 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

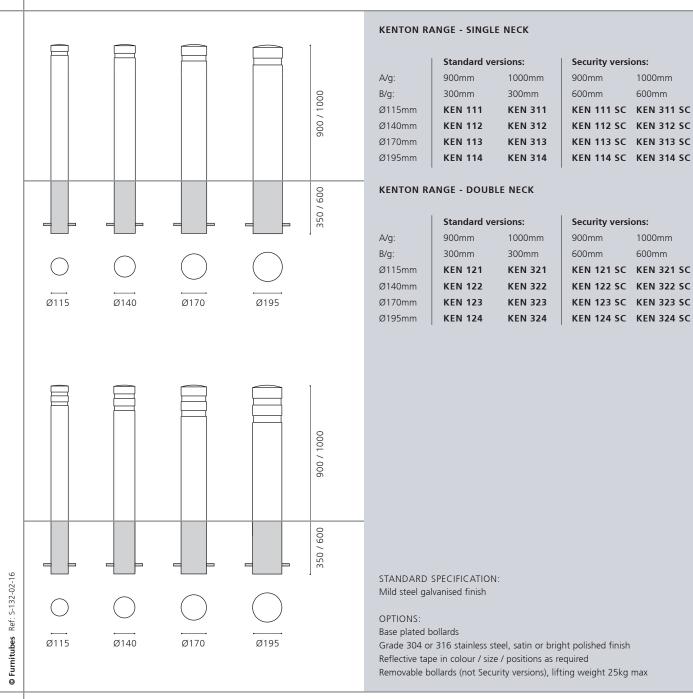
### Coordinated service bollard

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.

© Furnitubes Ref: S-131-03-16



### KENTON BOLLARD RANGE



### HARROW BOLLARD RANGE

### Circular ringed bollards

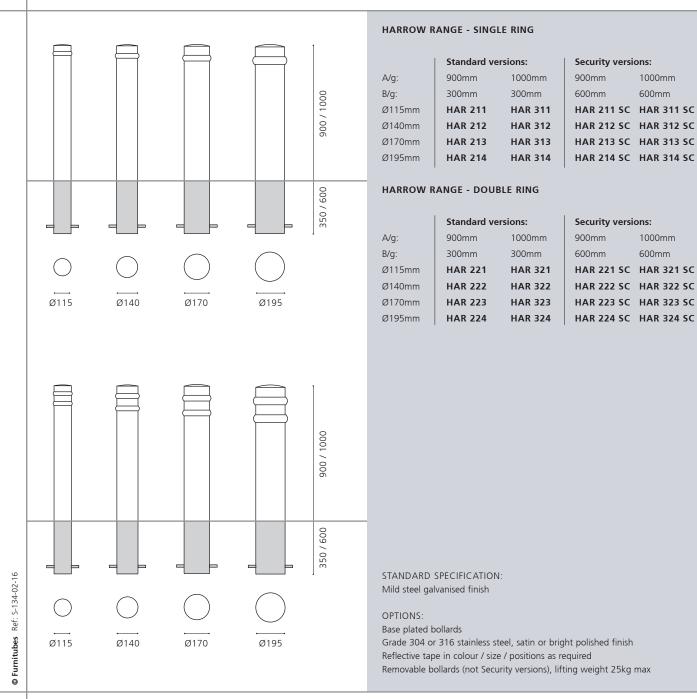
The Harrow range offers a versatile choice of steel bollards suitable for many different types of locations, including highways, retail parks, educational establishments and housing developments. The addition of feature rings make the bollards more decorative than simple circular steel tubes and therefore 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.

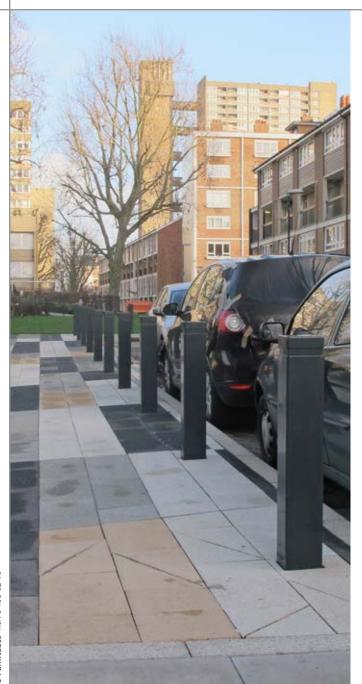


© Furnitubes Ref: S-133-02-16

### HARROW BOLLARD RANGE



### ALPERTON BOLLARD RANGE

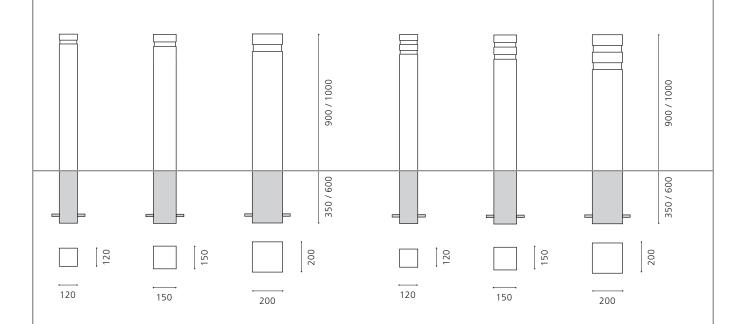


### **Square necked bollards**

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.

© Furnitubes Ref: S-135-02-16

### ALPERTON BOLLARD RANGE



### **ALPERTON RANGE - SINGLE NECK**

	Standard vers	ions:	Security versions:		
A/g:	900mm	1000mm	900mm	1000mm	
B/g:	300mm	300mm	600mm	600mm	
120 x 120mm	ALP 311	ALP 511	ALP 311 SC	ALP 511 SC	
150 x 150mm	ALP 312	ALP 512	ALP 312 SC	<b>ALP 512 SC</b>	
200 x 200mm	ALP 313	ALP 513	ALP 313 SC	<b>ALP 513 SC</b>	

### **ALPERTON RANGE - DOUBLE NECK**

	Standard versions:		Security versi	ons:
A/g:	900mm	1000mm	900mm	1000mm
B/g:	300mm	300mm	600mm	600mm
120 x 120mm	ALP 321	ALP 521	ALP 321 SC	ALP 521 SC
150 x 150mm	ALP 322	ALP 522	ALP 322 SC	ALP 522 SC
200 x 200mm	ALP 323	ALP 523	ALP 323 SC	ALP 523 SC

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

www.furnitubes.com

tel: 020 8378 3200

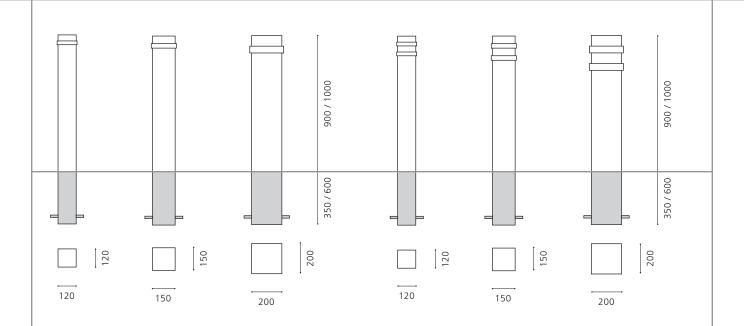


### **Square ringed bollards**

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:		Security version	ons:
A/g:	900mm	1000mm	900mm	1000mm
B/g:	300mm	300mm	600mm	600mm
120 x 120mm	SUD 411	SUD 511	SUD 411 SC	SUD 511 SC
150 x 150mm	SUD 412	SUD 512	SUD 412 SC	SUD 512 SC
200 x 200mm	SUD 413	SUD 513	SUD 413 SC	SUD 513 SC

### **SUDBURY RANGE - DOUBLE RING**

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

Security	versions.
900mm	1000m

900mm	1000mm
600mm	600mm
SUD 421 SC	SUD 521 SC
SUD 422 SC	SUD 522 SC
SUD 423 SC	SUD 523 SC

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

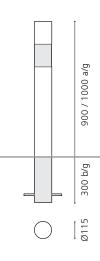
Removable bollards (not Security versions), lifting weight 25kg max

www.furnitubes.com tel: 020 8378 3200

### © Furnitubes Ref: S-139-03-16

### 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

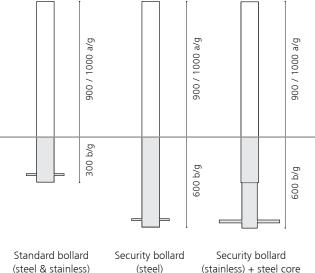
Base plated bollards

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.



### 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

### STIRLING RANGE Standard versions: 900mm 1000mm B/g: 300mm 300mm Ø60mm STL 706 STL 806 Ø76mm STL 737 STL 837

STL 708

STL 700

STL 701

STL 703

STL 705

STL 702

**STL 704** 

STANDARD SPECIFICATION: Mild steel galvanised finish

### OPTIONS:

Ø89mm

Ø102mm

Ø115mm

Ø140mm

Ø170mm

Ø153mm\*\*

Ø195mm\*\*

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)

**STL 808** 

**STL 800** 

**STL 801** 

**STL 803** 

**STL 805** 

STL 802

**STL 804** 

Security versions:

1000mm

600mm

n/a

n/a

n/a

STL 700 SC\* STL 800 SC\*

STL 701 SC STL 801 SC

STL 703 SC STL 803 SC

STL 705 SC STL 805 SC

STL 702 SC STL 802 SC

STL 704 SC STL 804 SC

900mm

600mm

n/a

n/a

Base plated bollards

### 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.



www.furnitubes.com

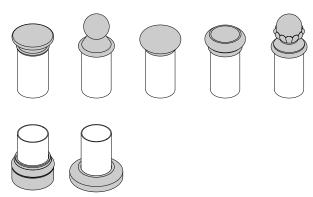
### LINX 100 & 200 BOLLARD RANGES

### 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 Ø115mm steel tube, and the 200 range on a Ø75mm 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				LINX 100 BOLLA	RD COLLARS	
EUSTON	TRAFFORD	ASHTON	HALE	KNIGHTSBRIDGE	EUSTON	TRAFFORD
<b>LEB 100</b> Steel / iron bollard	LTB 100 Steel / iron bollard	LAB 100 Steel / iron bollard	<b>LHB 100</b> Steel / iron bollard	LKB 100 Steel / iron bollard	EB 100 Cast iron collar	<b>TB 100</b> Cast iron collar
STANDARD SPECIFICATION:  Posts in mild steel, galvanised  Caps in cast iron  Bollard assembly in painted finish  Stainless steel post, various grades and finishes  Removable bollards, lifting weights approx 25kg max						

### LINX 200 BOLLARD RANGE



LINX 200 BOLLARDS				LINX 200 BOLLA	RD COLLARS	
EUSTON Steel / iron bollard	TRAFFORD Steel / iron bollard	ASHTON Steel / iron bollard	HALE Steel / iron bollard	KNIGHTSBRIDGE Steel / iron bollard	EUSTON	TRAFFORD
LEB 200 1160mm / 375mm LEM 200 805mm / 300mm	LTB 200 1220mm / 375mm LTM 200 865mm / 300mm	LAB 200 1170mm / 375mm LAM 200 815mm / 300mm	LHB 200 1170mm / 375mm LHM 200 815mm / 300mm	LKB 200 1220mm / 375mm LKM 200 865mm / 300mm	EB 200 Cast iron collar	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						

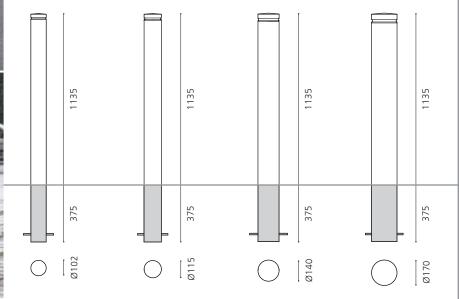
### LINX 400 BOLLARD RANGE



### 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	LNB 100	LNB 500
Mild steel galv post	Mild steel galv post	Mild steel galv pos
& S/S G304 cap	& S/S G304 cap	& S/S G304 cap

| LNB 700 | galv post | Mild steel galv post | 804 cap | & 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.

1000	1000	1000	10000
Ø115 285	Ø170 320	009	009
		Ø115	Ø170

HOLBORN MAJOR

HOL 510 Steel / iron bollard

OPTIONS:

Base plated bollard Removable bollard, lifting weight: 22kg HOL 520 Steel / iron bollard

OPTIONS: Base plated bollard Removable bollard,

lifting weight: 40kg

HOL 510 SC

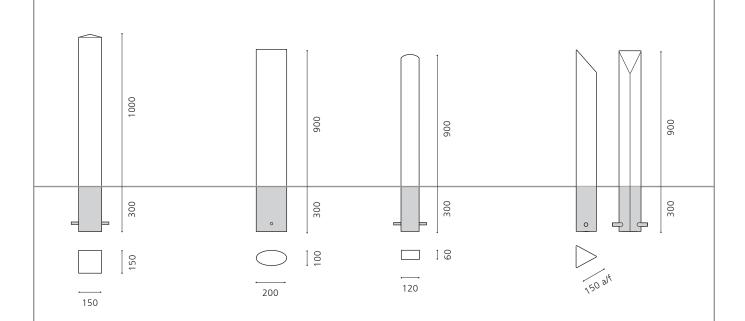
**HOLBORN** 

**SECURITY** 

HOL 510 SC Steel / iron bollard HOLBORN MAJOR SECURITY

HOL 520 SC Steel / iron bollard

### STAINLESS STEEL BOLLARDS



### **ELTHAM**

### **ELT 715 S**

G304 S/S satin polished

### OPTIONS:

Base plated bollard Removable bollard Bright polished G316 S/S

### OVAL

### **OVA 712 S**

G304 S/S satin polished

### OPTIONS:

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

### PINNACLE

### PIN 452 S

G304 S/S satin polished

### OPTIONS:

Base plated bollard Removable bollard Bright polished G316 S/S









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

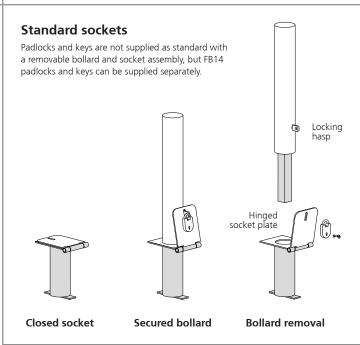
- Simple economic solution using galvanised mild steel socket
- Ease of operation is convenient for situations where bollard needs to be removed quickly and / or frequently, such as emergency access routes
- Hasp fitted to bollard passes through slot in socket hinge plate for locking with an FB14 padlock (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

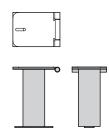


### STEEL & STAINLESS STEEL REMOVABLE BOLLARDS



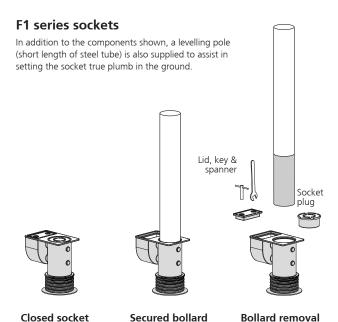
### Operation

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.





### 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.

**© Furnitubes** Ref: S-150-02-16



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.

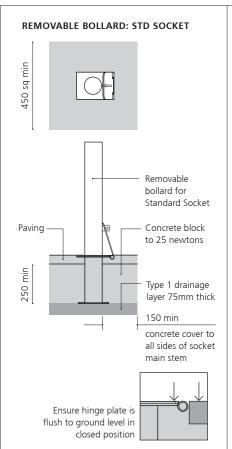
### Installation details

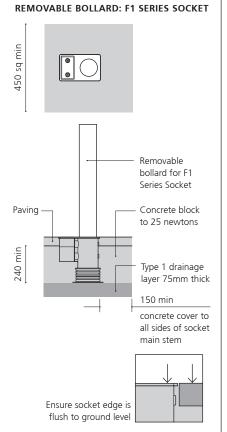
It is important that bollards have a suitable foundation so that they remain firmly in place if they are knocked at any time. Shown below are the minimum recommended requirements for concrete foundation block for fixed and removable bollards in a typical installation in normal ground conditions. Particular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

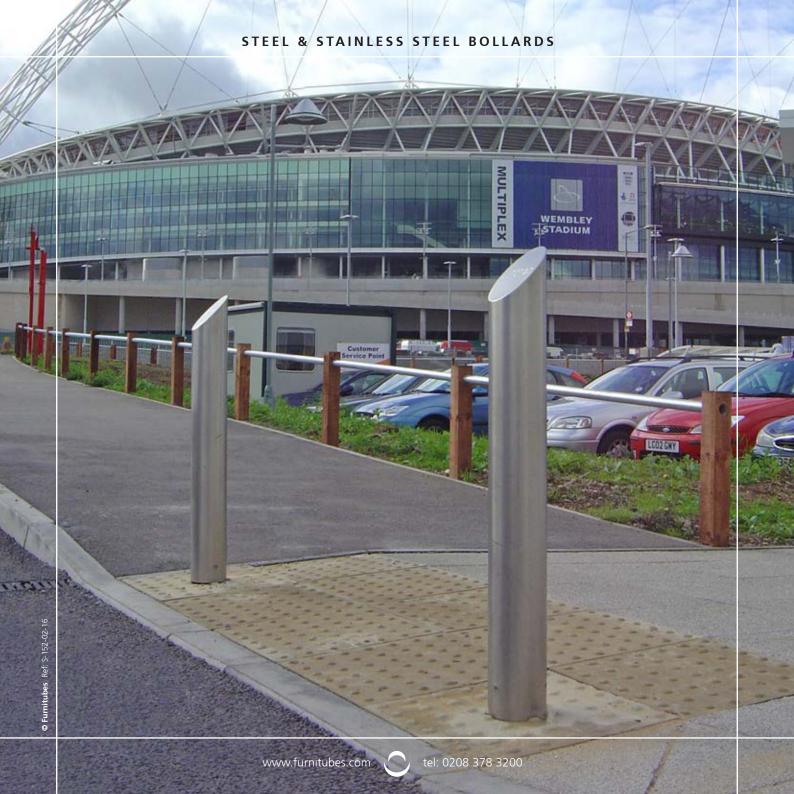
- Set the bollard at the depth / height as shown in the specific bollard illustration
- Ensure concrete penetrates through the below-ground apertures (where applicable) into the internal void of the bollard up to ground level

# Paving Fixed bollard Concrete block to 25 newtons \* 600min depth for security versions To min concrete cover to all sides of bollard root

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







### STEEL & STAINLESS STEEL BOLLARDS



View or download other product e-brochures at the following link:

### www.furnitubes.com/brochures



© Furnitubes

### Furnitubes\*

3rd Floor, Meridian House, Royal Hill, Greenwich

### **LONDON SE10 8RD**

**T:** +44 (0)20 8378 3200 sales@furnitubes.com www.furnitubes.com