



FURNITUBES



CAST IRON BOLLARDS



PRODUCT BROCHURE

Ref: E-008-01-13

CAST IRON BOLLARDS



INTRODUCTION

Choice, stock and special adaptations

Cast iron bollards have been used as boundary markers in our towns and cities for many centuries, and in more recent times as an effective means of segregating pedestrians and vehicles on our increasingly busy streets. Cast iron bollards are manufactured using traditional founding techniques, giving a distinctive surface finish derived from the sand face of the moulds, and is a process that is particularly suited to creating intricate three dimensional detailing. With over 50 styles of cast iron bollards, Furnitubes has amongst the largest selections on offer in the UK. In addition to the primed finish standard fixed bollards available from stock, we are able to offer the further services / adaptations:

- **Painting and highlighting**

Single colour top coat painting, highlighting to enhance decorative features and reflective tape to improve the visibility of a bollard

- **Removable bollards**

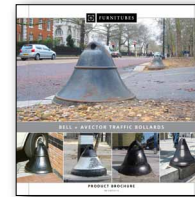
Adapted bollards with a choice of 2 socket types, to allow removal of a bollard where temporary access is required

- **Chainlink**

Eye-bolts can be fitted to bollards, onto which chainlink can be connected to control pedestrian access

- **Railing posts and cycle stands**

Most bollards can be supplied with pre-drilled holes to accept rails for a more permanent barrier solution or for cycle parking purposes



Bell Traffic Bollards

Details of the Bell & Avector ranges of traffic-calming bollards are included in their own brochure

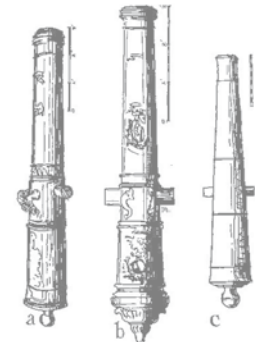


CAST IRON BOLLARDS - CANNON RANGE

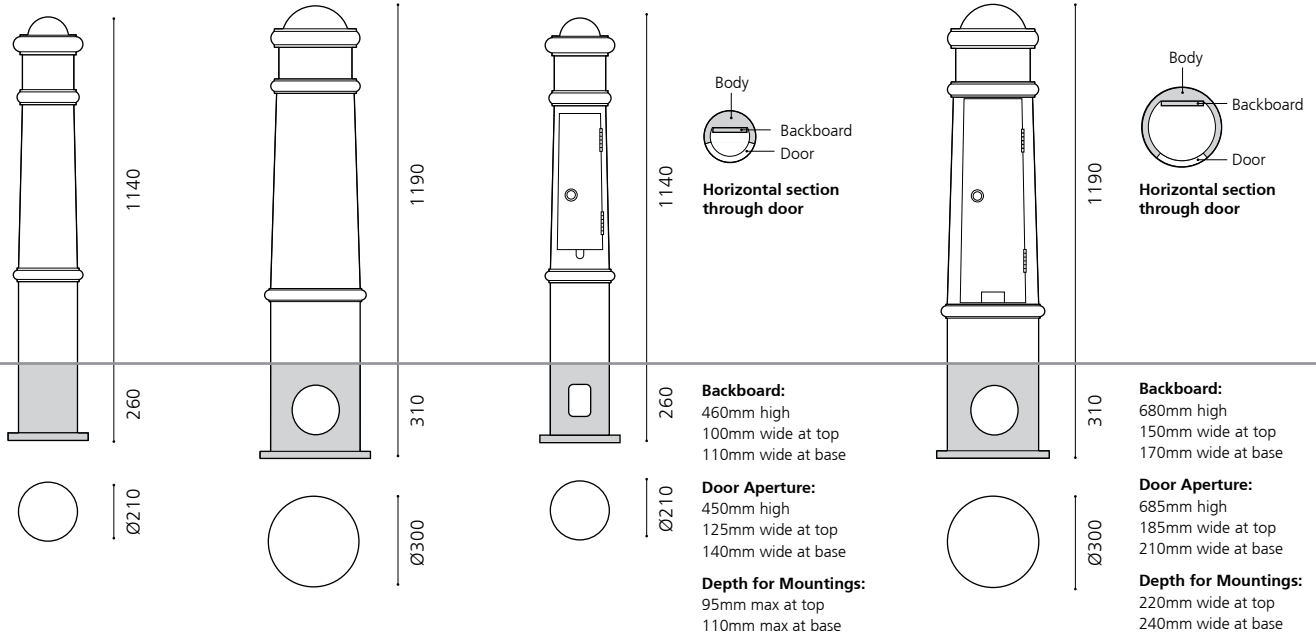


Modern interpretation of age-old bollards

As early as the 17th century decommissioned cannons were used as bollards on quaysides, where they would be buried in the ground muzzle-first, leaving the breech (rear end) projecting above the ground for the attachment of ropes. In the 19th century, purpose-made bollards were often given a cannon shape, and this is the basis of Furnitubes' Cannon range, with the semi-spherical top representing a lodged cannon ball. The Cannon is a longstanding favourite from our cast iron bollard range and the standard version is a popular choice for historic sites throughout the UK, including within the City of Westminster, London. The standard Cannon is a large bollard and therefore most often used on wide streets layouts, and / or where bollards are required to be very prominent features that are obvious to motorists and visually impaired pedestrians in particular. The larger Cannon Major presents an even greater physical presence. As well as a fixed version, the standard Cannon is offered as a cast aluminium removable bollard for use with a standard socket for ease of removal, or with an F1 series socket which is best suited where the bollard is removed less frequently, but for longer periods, as the socket is flush-fitting and can be overrun by vehicles. Both the Cannon and Cannon Major bollards are also offered as service bollards to house electrical or water feeds for use by market stall holders, street traders and at street events.



CAST IRON BOLLARDS - CANNON RANGE



CANNON

CAN 500

Cast iron bollard
Weight: 90kg

OPTIONS:

Cast aluminium removable,
lifting weight: 45kg

CANNON MAJOR

CAN 500 M

Cast iron bollard
Weight: 180kg

CANNON SERVICE

CAN 500 E

Cast iron service bollard with fitted timber
backboard, & locking hinged door
Weight: 90kg

CANNON MAJOR SERVICE

CAN 500 ME

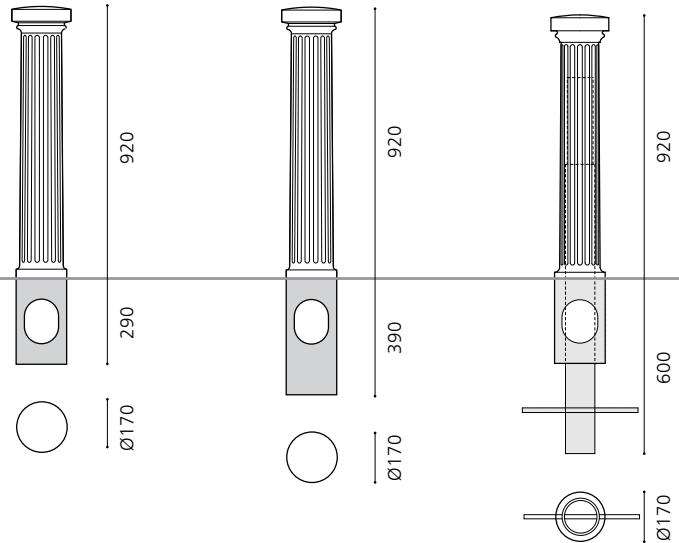
Cast iron service bollard with fitted timber
backboard, & locking hinged door
Weight: 180kg



CAST IRON BOLLARDS - DORIC RANGE

Architectural column-style bollards

The Doric bollard - featuring decorative fluted sides and a shallow domed top - is based on the classical Greek architectural column of over 2,000 years ago. This well proportioned and durable bollard is commonplace throughout many UK towns and cities. The basic design is offered in 3 sizes, with additional options of extended root and security versions of the standard mid-size bollard, and the Major is available as a service bollards to house an electrical feed. Removable options are available for the Slimline and standard models. The Capstan bollard - a Doric Slimline but without the decorative flutes - completes this comprehensive range of coordinated bollard designs. The standard bollard is also available in a polyurethane elastomer (PU) material - please refer to the relevant section of the brochure for all PU options. A complementary fingerpost is also part of the Doric family.



DORIC

DOR 520

Cast iron bollard
Weight: 55kg

OPTIONS:

Cast aluminium removable,
lifting weight: 25kg

DORIC DEEP ROOT

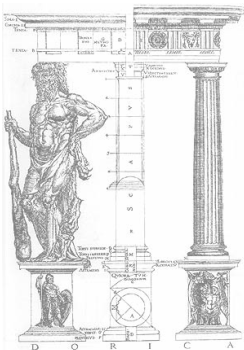
DOR 520 ER

Cast iron bollard
Weight: 64kg

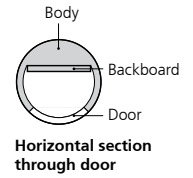
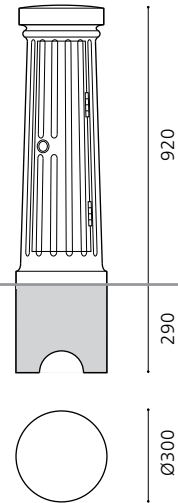
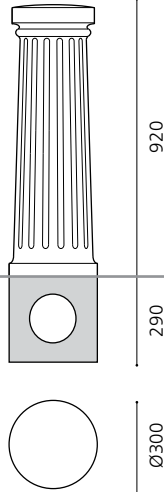
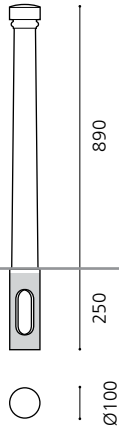
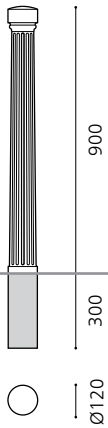
DORIC SECURITY

DOR 520 SC

Cast iron bollard c/w steel
section core in primed finish
Weight: 75kg



CAST IRON BOLLARDS - DORIC RANGE



Backboard:
720mm high
130mm wide at top
160mm wide at base

Door Aperture:
700mm high
125mm wide at top
155mm wide at base

Depth for Mountings:
130mm wide at top
160mm wide at base

DORIC SLIMLINE

DOR 520 S

Cast iron bollard
Weight: 20kg

OPTIONS:

Cast iron removable,
lifting weight: 20kg

CAPSTAN

CAP 520 S

Cast iron bollard
Weight: 20kg

OPTIONS:

Cast iron removable,
lifting weight: 20kg

DORIC MAJOR

DOR 520 M

Cast iron bollard
Weight: 120kg

DORIC MAJOR SERVICE

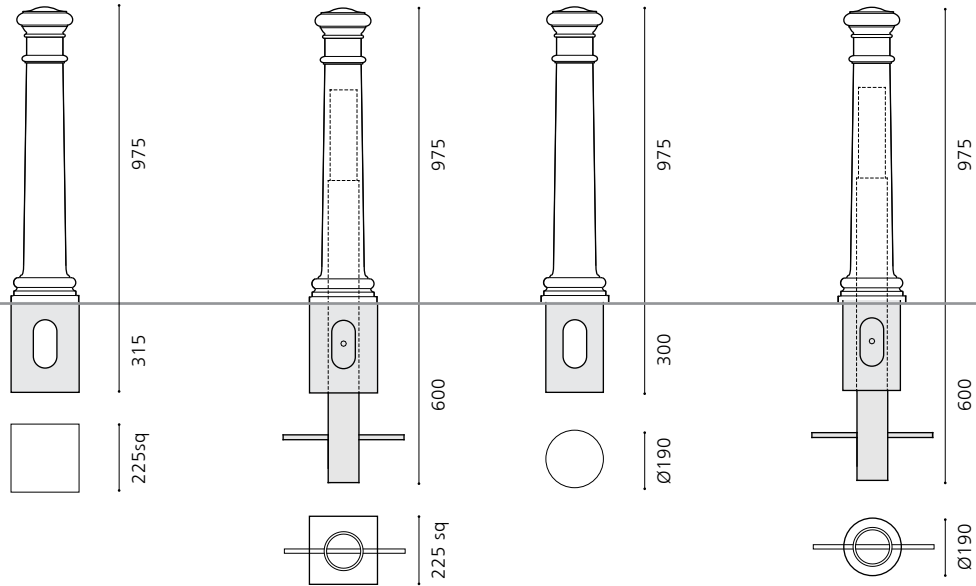
DOR 520 ME

Cast iron service bollard with fitted timber
backboard, & locking hinged door
Weight: 120kg



CAST IRON BOLLARDS - MANCHESTER RANGE

The Manchester range of cast iron bollards are longstanding favourites from our range - extensively used in many city centres around the country. The bollard is available in two basic designs - square and round base. The square base version is easier to install in areas of blocks or flags as the paving can be cut in straight lines to achieve a neat finish around the base. Both the square and round base are available with steel cores for added strength in security applications. The square base bollard can also be used as a base for a standard fingerpost column to provide a coordinated suite of products.



MANCHESTER SQUARE BASE

MAN 536 SB

Cast iron bollard
Weight: 50kg

OPTIONS:

Cast aluminium removable,
lifting weight: 25kg

MANCHESTER SQUARE BASE SECURITY

MAN 536 SB SC

Cast iron bollard c/w steel
section core in primed finish
Weight: 65kg

MANCHESTER ROUND BASE

MAN 536 RB

Cast iron bollard
Weight: 52kg

OPTIONS:

Cast aluminium removable,
lifting weight: 25kg

MANCHESTER ROUND BASE SECURITY

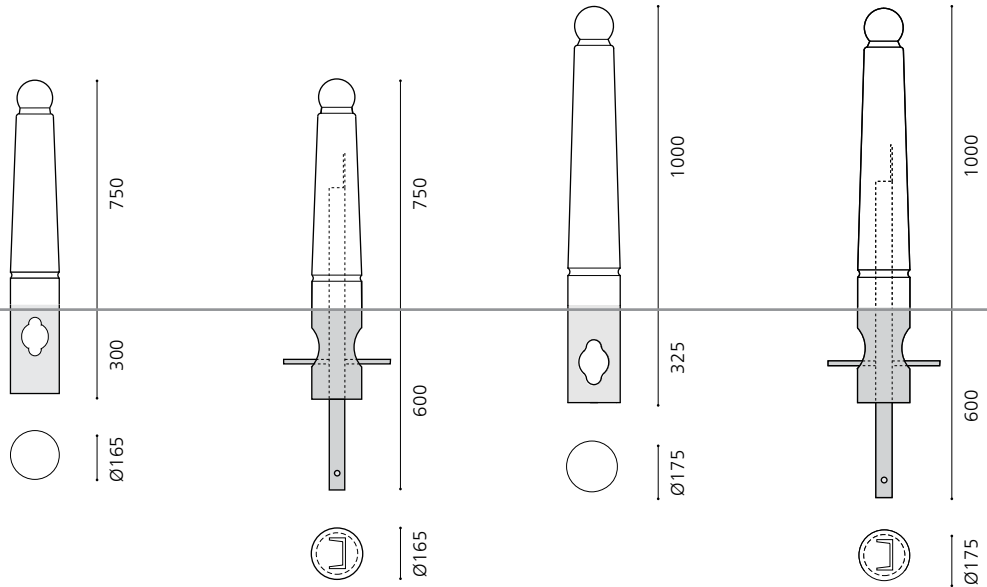
MAN 536 RB SC

Cast iron bollard c/w steel
section core in primed finish
Weight: 70kg



CAST IRON BOLLARDS - GUNNER RANGE

The Gunner range is a Furnitubes' original design dating back to the late 1980s. With a gently tapered profile and ball-top, the range is based on a simplified cannon form. The security versions of the Gunner are a popular choice for front-of-house protection for retail parks, and have been the standard specification for Dixons Stores Group premises for many years. The range is offered in two size versions, with the Gunner Major used for increased visibility in pedestrianised areas. Both versions are available as fixed bollards, removable bollards, removable versions and security versions with a steel core reinforcement.



GUNNER

GUN 503

Cast iron bollard
Weight: 35kg

OPTIONS:

Cast aluminium removable,
lifting weight: 18kg

GUNNER SECURITY

GUN 503 SC

Cast iron bollard c/w steel
section core in primed finish
Weight: 50kg

GUNNER MAJOR

GUN 100

Cast iron bollard
Weight: 50kg

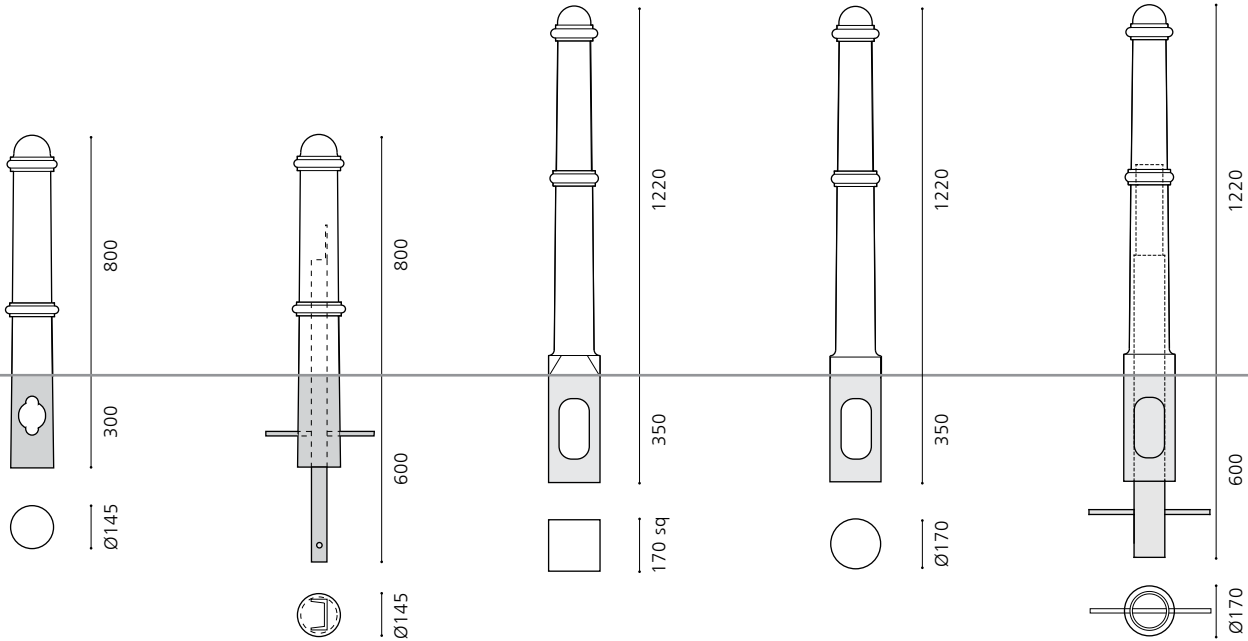
GUNNER MAJOR SECURITY

GUN 100 SC

Cast iron bollard c/w steel
section core in primed finish
Weight: 65kg



CAST IRON BOLLARDS - WARMINSTER RANGE



WARMINSTER MEDIUM

WAR 811

Cast iron bollard
Weight: 32kg

OPTIONS:

Cast aluminium removable,
lifting weight: 16kg

WARMINSTER MEDIUM SECURITY

WAR 811 SC

Cast iron bollard c/w steel
section core in primed finish
Weight: 45kg

WARMINSTER LARGE SQUARE BASE

WAR 511 SB

Cast iron bollard
Weight: 55kg

OPTIONS:

Cast aluminium removable,
lifting weight: 28kg

WARMINSTER LARGE ROUND BASE

WAR 511 RB

Cast iron bollard
Weight: 50kg

OPTIONS:

Cast aluminium removable,
lifting weight: 28kg

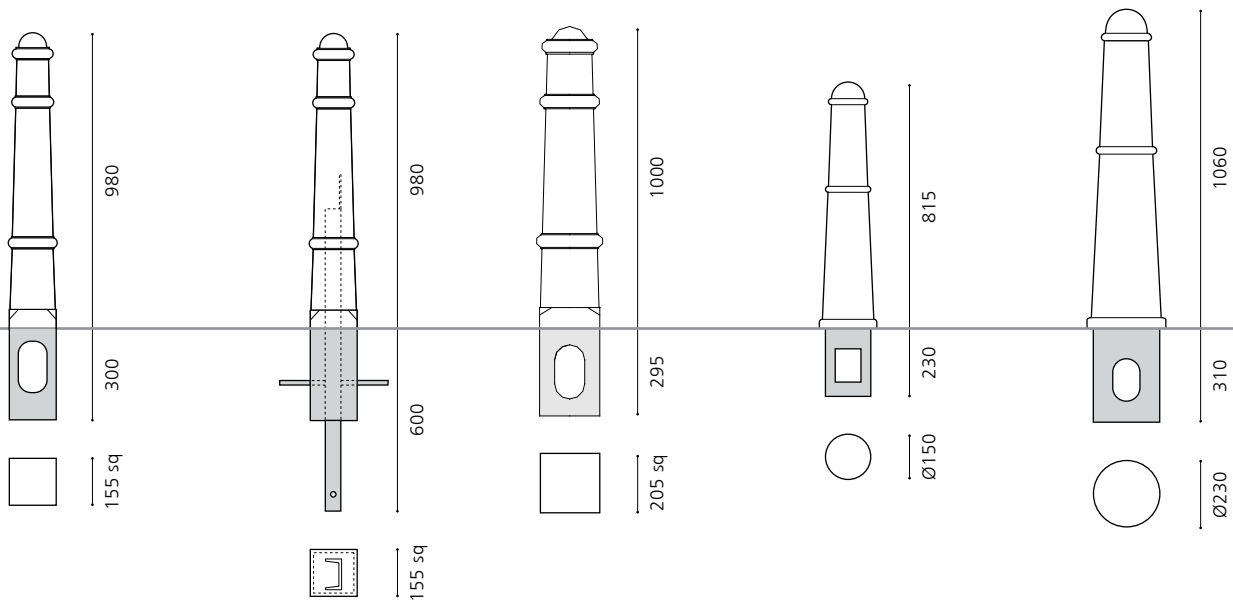
WARMINSTER LARGE ROUND BASE SECURITY

WAR 511 RB SC

Cast iron bollard c/w steel
section core in primed finish
Weight: 65kg



CAST IRON BOLLARDS - TRAFALGAR + CORPORATION RANGES



TRAFALGAR MEDIUM

TRA 631

Cast iron bollard
Weight: 45kg

OPTIONS:
Cast aluminium removable,
lifting weight: 25kg

TRAFALGAR MEDIUM SECURITY

TRA 631 SC

Cast iron bollard c/w steel
section core in primed finish
Weight: 55kg

TRAFALGAR LARGE

TRA 632

Cast iron bollard
Weight: 90kg

OPTIONS:
Cast aluminium removable,
lifting weight: 30kg

CORPORATION SLIMLINE

COR 740

Cast iron bollard
Weight: 35kg

OPTIONS:
Cast aluminium removable,
lifting weight: 18kg

CORPORATION

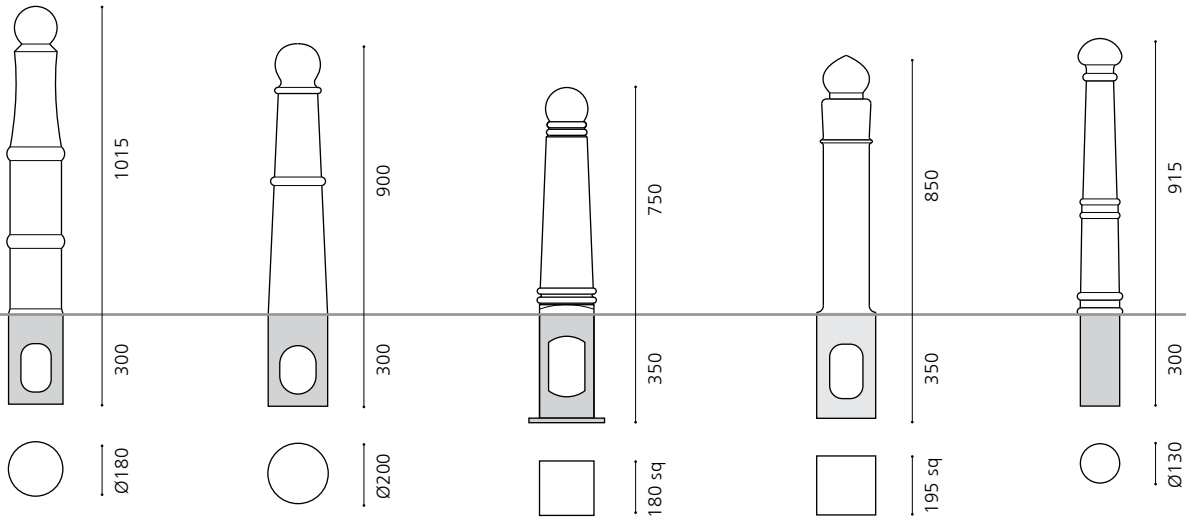
COR 741

Cast iron bollard
Weight: 82kg

OPTIONS:
Cast aluminium removable,
lifting weight: 30kg



CAST IRON BOLLARDS - BALL-TOPPED



TELFORD

TEL 550

Cast iron bollard
Weight: 55kg

OPTIONS:

Cast aluminium removable,
lifting weight: 30kg

SOUTHWARK

SOU 130

Cast iron bollard
Weight: 50kg

OPTIONS:

Cast aluminium removable,
lifting weight: 25kg

BATTLE

BAT 750

Cast iron bollard
Weight: 60kg

OPTIONS:

Cast aluminium removable,
lifting weight: 25kg

BRIGHTON

BRN 707

Cast iron bollard
Weight: 60kg

OPTIONS:

Cast aluminium removable,
lifting weight: 25kg

EDINBURGH

EDN 526

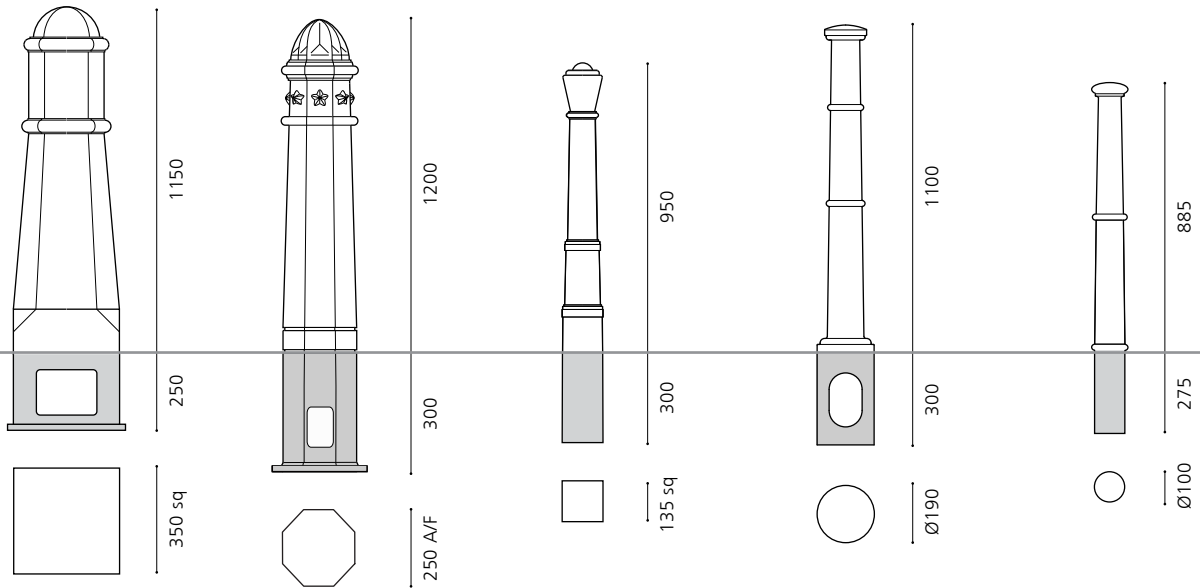
Cast iron bollard
Weight: 35kg

OPTIONS:

Cast aluminium removable,
lifting weight: 18kg



CAST IRON BOLLARDS - TRADITIONAL



JERMYN

JER 115

Cast iron bollard
Weight: 155kg

NEW KENNINGTON

KEN 525

Cast iron bollard
Weight: 120kg

ENNISMORE

ENN 567

Cast iron bollard
Weight: 40kg

GAINSBOROUGH

GSB 511

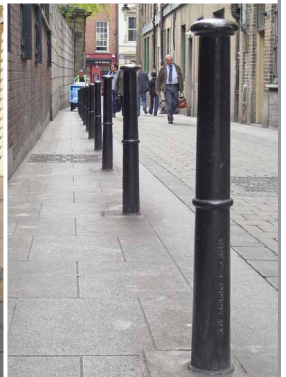
Cast iron bollard
Weight: 55kg

BRUNEL

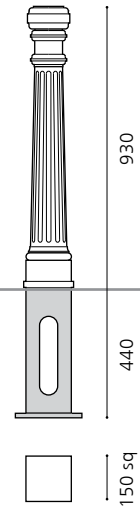
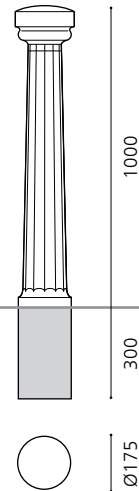
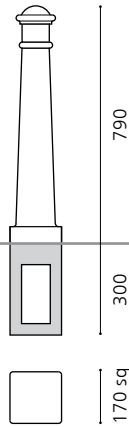
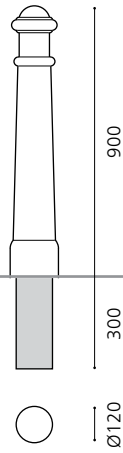
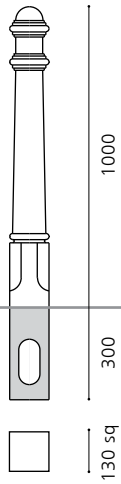
BRU 523

Cast iron bollard
Weight: 25kg

OPTIONS:
Cast iron removable,
lifting weight: 25kg



CAST IRON BOLLARDS - TRADITIONAL



HAMMERSMITH

HAM 500

Cast iron bollard
Weight: 38kg

OPTIONS:
Cast aluminium removable,
lifting weight: 20kg

CANTERBURY

CTB 930

Cast iron bollard
Weight: 38kg

OPTIONS:
Cast aluminium removable,
lifting weight: 18kg

VICEROY

VIC 521

Cast iron bollard
Weight: 36kg

OPTIONS:
Cast aluminium removable,
lifting weight: 16kg

BERESFORD

BER 507

Cast iron bollard
Weight: 52kg

OPTIONS:
Cast aluminium removable,
lifting weight: 20kg

BELSIZE

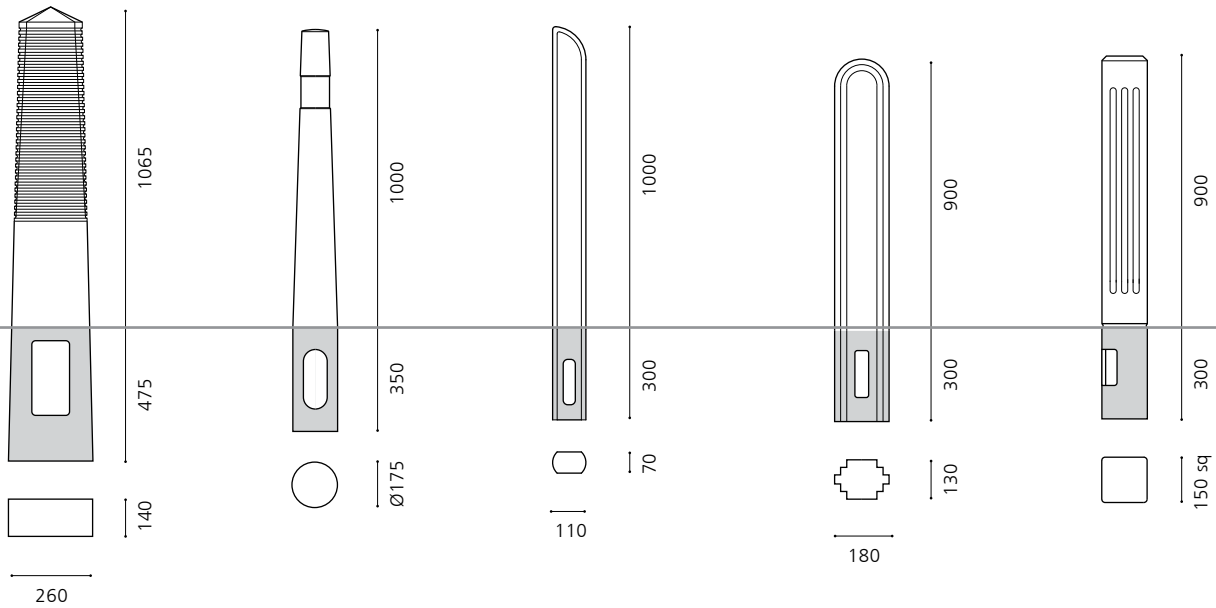
BEL 506

Cast iron bollard
Weight: 65kg

OPTIONS:
Cast aluminium removable,
lifting weight: 30kg



CAST IRON BOLLARDS - CONTEMPORARY



CITY

CIT 538

Cast iron bollard
Weight: 100kg

OPTIONS:

Cast aluminium removable,
lifting weight: 30kg
Sign plinth 200 x 120mm

CAPITAL

CAP 100

Cast iron bollard
Weight: 35kg

OPTIONS:

Cast aluminium removable,
lifting weight: 16kg

LAMBETH

LAM 510

Cast iron bollard
Weight: 35kg

SHERRATT

SHE 502

Cast iron bollard
Weight: 70kg

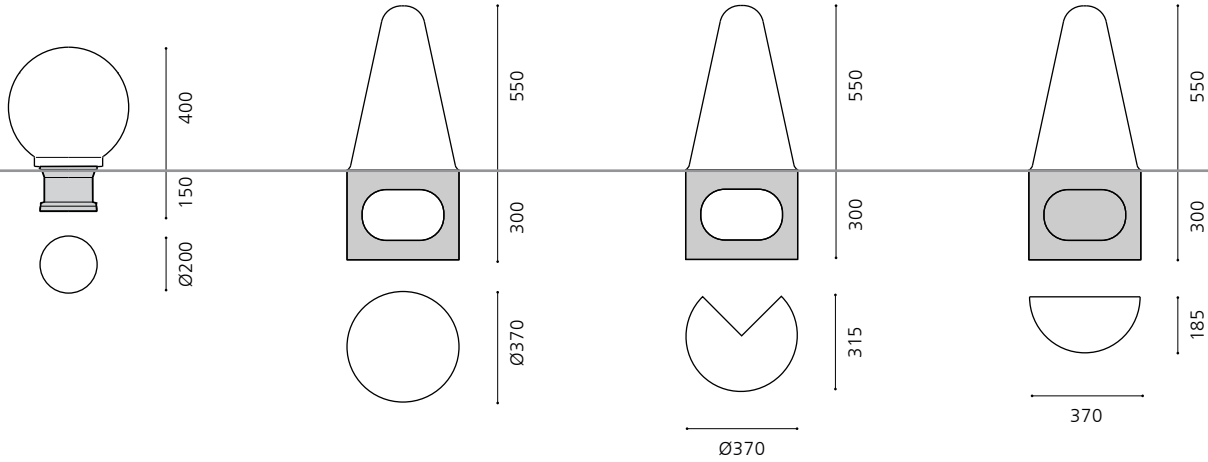
PALACE

PAL 150

Cast iron bollard
Weight: 55kg



CAST IRON BOLLARDS - LOW LEVEL



GLOBAL

GLB 400

Cast iron bollard
Weight: 40kg

DOCKSIDE

DOC 704

Cast iron bollard
Weight: 55kg

DOCKSIDE THREE QUARTER

DOC 705

Cast iron bollard
Weight: 45kg

DOCKSIDE HALF

DOC 706

Cast iron bollard
Weight: 45kg



CAST IRON BOLLARDS - SPECIFICATION & INSTALLATION

General specification

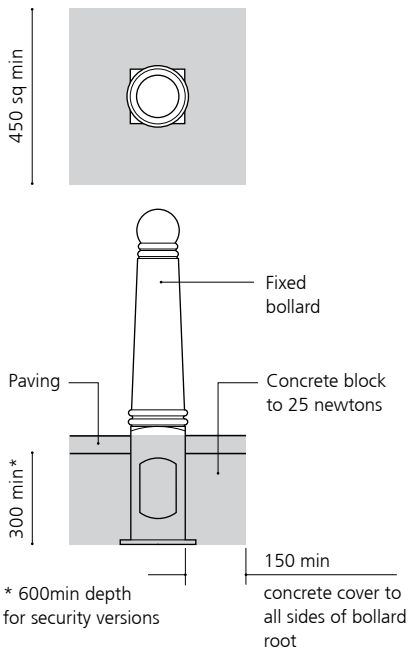
All bollards are supplied in grey cast iron as standard, but can be cast in ductile iron for improved tensile strength if required. Removable bollards are cast in grey iron or aluminium, depending on their weight - refer to individual bollard specifications for details. Standard finish is painted to primer coat, for on-site application of top coats. If preferred, bollards can be supplied to finished top coat, including painting of decorative rings, although this will add to the delivery lead time and any damage to the paint surface will require touching up on site.

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 blocks for fixed and removable bollards in typical installations in normal ground conditions. Particular attention should be paid to the following:

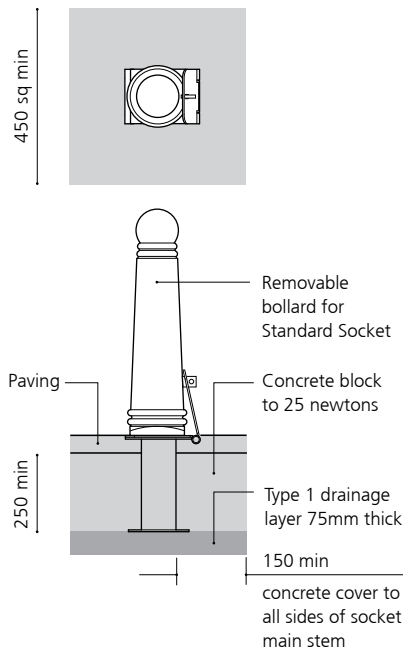
- Set the bollard at the depth / height as shown in the specific bollard illustration
- Ensure concrete penetrates through the below-ground apertures (where applicable) into the internal void of the bollard up to ground level

FIXED BOLLARD

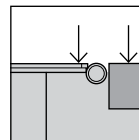


The professional advice of a highway / civil engineer should be sought if there are any queries regarding the ground conditions or doubts over the suitability of the foundation.

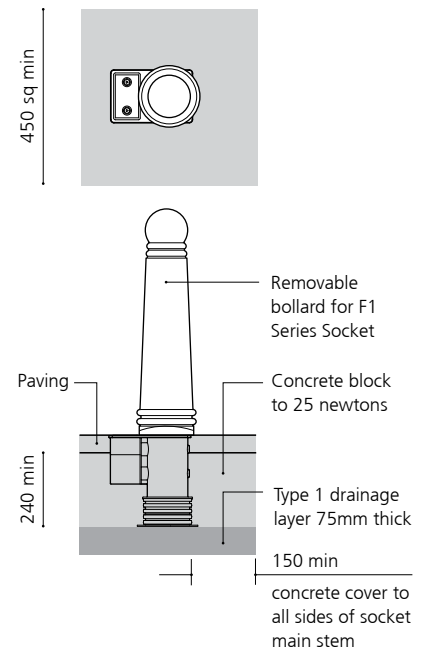
REMOVABLE BOLLARD: STD SOCKET



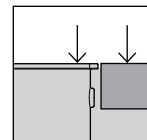
Ensure hinge plate is flush to ground level in closed position



REMOVABLE BOLLARD: F1 SERIES SOCKET



Ensure socket edge is flush to ground level



CAST 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 decorative bollards are available as removable versions, with smaller models available in cast iron and larger bollards in cast aluminium to reduce the lifting weight (cast aluminium is around 60% lighter than cast iron).

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. For both options, a durable galvanised steel spigot is fitted to the base of the casting for locating into the ground socket.

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

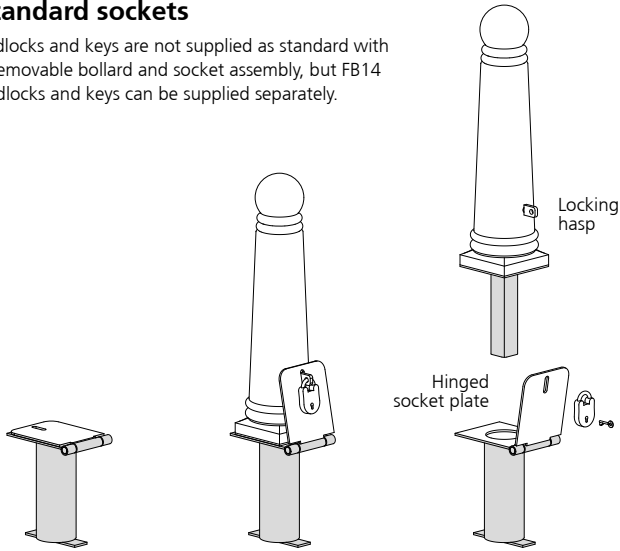
- Neat flush-fitting solution constructed in heavy duty cast iron, steel and hard-wearing plastics
- Takes longer (than standard socket) to insert / remove bollard, so may not be suitable for emergency vehicular routes or when bollard needs to be removed frequently
- Circular bollard spigot locates in 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



CAST 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.



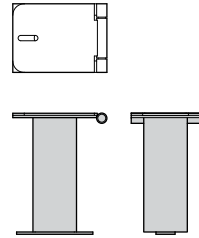
Closed socket

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 the bollard to the socket with an FB14 padlock or similar. 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.

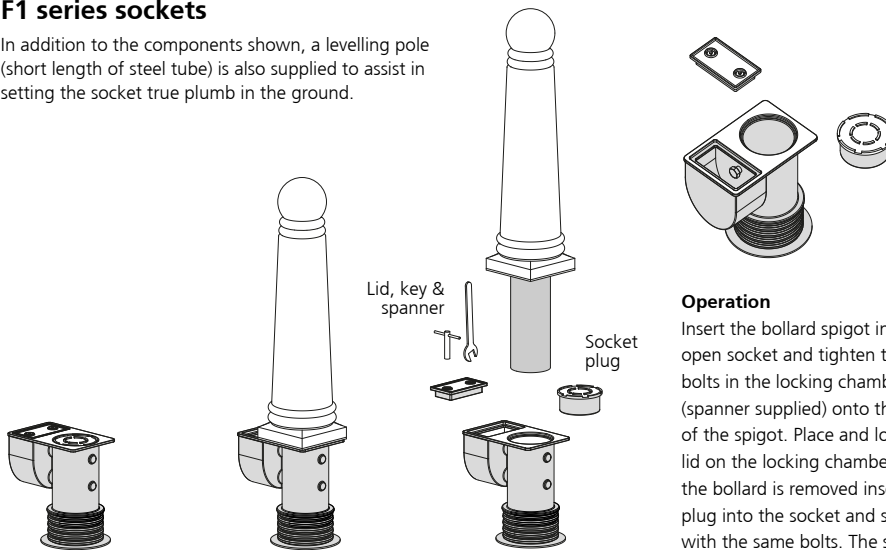


Dimensions

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.



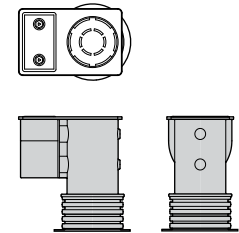
Closed socket

Secured bollard

Bollard removal

Operation

Insert the bollard spigot into the open socket and tighten the 2no. bolts in the locking chamber (spanner supplied) onto the sides of the 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.

CAST IRON BOLLARDS - COLOURS



Painting and highlighting

Although we recommend that bollards are supplied in a primed finish (as pre-painted products are likely to suffer damage during installation), we recognise that site painting may be difficult in some situations, for example due to the weather conditions at the time of installation or because the public have access to the site. This situation can be compounded if the bollards are painted in more than one colour. If requested, we are able to offer a full painting service using our in-house spray booth facilities, to the details provided in the General Specification section of the bollards brochure. Decorative rings and caps can be highlighted as requested. If a painted surface is damaged prior to or during installation we are able to supply touch-up paint for localised on-site repairs.

Reflective tape

Bollards are generally sited to delineate vehicular routes and to segregate pedestrians and traffic. It is important therefore that bollards are visible to drivers, particularly in low light and night-time conditions. If supplied pre-painted, we are also able to apply reflective banding on many of our products. The Capital bollard in particular has a dedicated parallel-sided recess designed specifically for the application of reflective tape. Alternatively we can supply reflective tape for on-site application after painting. Our standard tape is to Class 1 specification and is therefore colour-fast, highly resistant to corrosion and weather, and has excellent adhesion properties. Standard colours available are red, white, yellow, blue, orange and green.

CAST IRON BOLLARDS WITH SIGNAGE

Crests and logos

Adding local authority or corporate crests onto bollards makes them more unique to the scheme or area. Coats of arms are traditional additions, but more modern logos can also be displayed. There are several ways of reproducing the artwork in 3-dimensional form, ranging from intricate fully sculpted crests to simple flat reliefs. Depending on the size and shape of the artwork, it can be cast integrally to the bollard or separately, and then mounted onto the bollard. Contrast highlighting can be employed to further accentuate the detail. Shown here are just a few examples of the range of styles and methods of displaying crests and logos on cast bollards.



D.f.T. Signage

Department for Transport signage, particularly parking regulations, is often displayed on high level steel posts, whose sole function is to display the small sign plate. The abundance of such signposts can significantly contribute to unnecessary visual clutter in the street scene. Where decorative bollards are being used for delineation / segregation purposes, they can often also be employed for displaying traffic regulation signage. Sign plates can be fitted in a variety of ways - from the simple application of reflective self-adhesive signs onto a bollard surface, to rigid sign plates on purpose-designed mountings. Please contact us to discuss the feasibility and options for applying traffic regulation signage to any of our cast iron bollards.

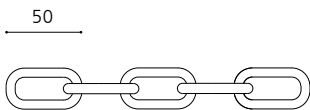
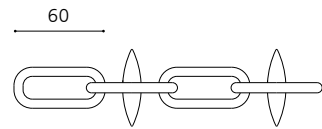


CAST IRON BOLLARDS AS BARRIERS



Bollards as barriers, railing posts & cycle stands

As well as being stand-alone items, bollards can also be used to form barriers that provide a stronger visual and physical division between adjacent areas. Eyebolts can be attached to bollards, to which chainlink can be fitted as permanent or removable features. Using rigid rails inserted into holes in the bollards forms a more robust barrier still, and rails can also be used for the purposes of cycle parking to create a coordinated suite of products. Please contact us to discuss the feasibility of adapting standard bollards to form barrier posts or as a base design for other street furniture.



CHAINLINK

CHNS

Alternate spiked galvanised steel

CHNP

Plain galvanised steel

CONNECTORS

EBAB

M10 Eyebolt bright zinc plated

DSHK

D-shackle galvanised steel

SLNK

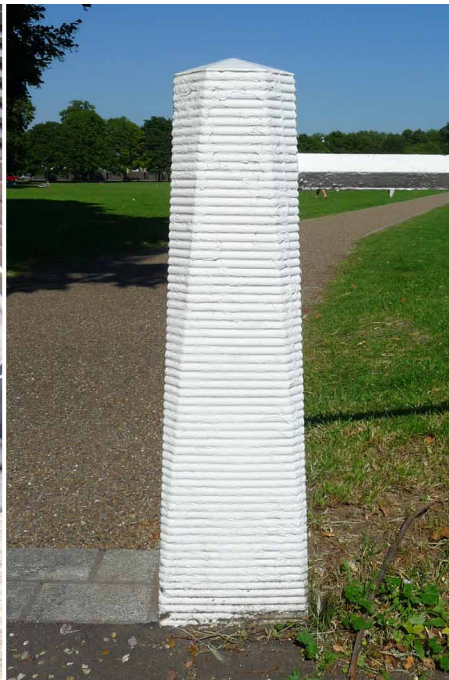
Split link 60 x 35mm galvanised steel



CAST IRON BOLLARDS - HISTORICAL REPLICAS

Replicas and specials

Historic bollards have become integral features in our towns and cities over many centuries and contribute to the local character and sense of place. Many bollards are afforded protection by conservation area or listed status, but as with any feature within the public realm, and particularly so on the highway, bollards are vulnerable to damage from vehicles and even site clearance for new building developments. Furnitubes can offer replacement replica bollards for such scenarios. If historic bollards are broken but not discarded, our pattern makers may be able to take impressions from the original to ensure a faithful reproduction. Where the originals have been lost or destroyed but there are similar in-situ examples in the area, we can accurately measure these and create a 3d drawing model of the proposed replacement for approval of the local conservation officer. And even where drawings or photographic evidence are the only points of reference, our expert designers are able to interpret these in order to match the original item as close as possible. Creating new replicas of historic bollards also enables new internal features to be introduced to strengthen the products and make them less vulnerable to damage in years ahead.



CAST IRON BOLLARDS BROCHURE



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