



POLYURETHANE & RECYCLED PLASTIC BOLLARDS



POLYURETHANE BOLLARDS

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An alternative to cast iron & steel bollards

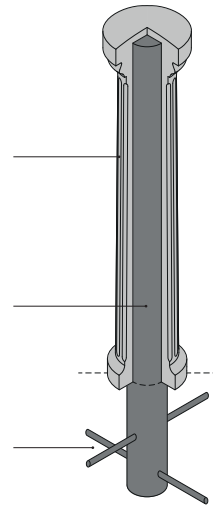
Polyurethane Elastomer (PU) is a thoroughly modern material offering low maintenance coupled with excellent resistance to the weather and many other types of abrasion. It is an ideal material for sites which present harsh environmental conditions, such as coastal locations. There are 18 bollard designs in the range - 12 of which echo the traditional forms of a selection of our cast iron originals, and 6 are a similar design to our tubular steel bollards. The bollards are manufactured from a tough, durable engineering grade polyurethane cast in a mould and onto a steel core. The surface finish of a PU bollard is typically much smoother than for cast iron (which is cast at high temperatures into sand moulds, which combine to give the material its characteristic textured finish). PU bollards are finished in a two pack polyurethane gloss coating to any RAL or BS 4800 colour reference.

Polyurethane (PU) bollard construction

Durable engineering grade PU outer moulding from top of bollard to ground level

Steel tube core extending below the PU moulding to form the bollard root

Tie bars through the steel core improve keying the bollard into its concrete foundation block



A wide range of designs and options

Like other materials offered by Furnitubes, PU is very versatile, enabling options and features such as decorative highlighting, removable versions, integral cast-in crests and logos etc on our standard range of bollards, as shown in the examples below. We are also able to create new moulds - as replicas of cast iron originals, or completely new designs to your own specification.

Highlighting

Feature rings and necks on decorative bollard designs can be highlighted in contrasting colours as required

Removable bollards

All PU bollards are available as removable versions, with a standard or F1 series socket, depending on the application

Reflective tape

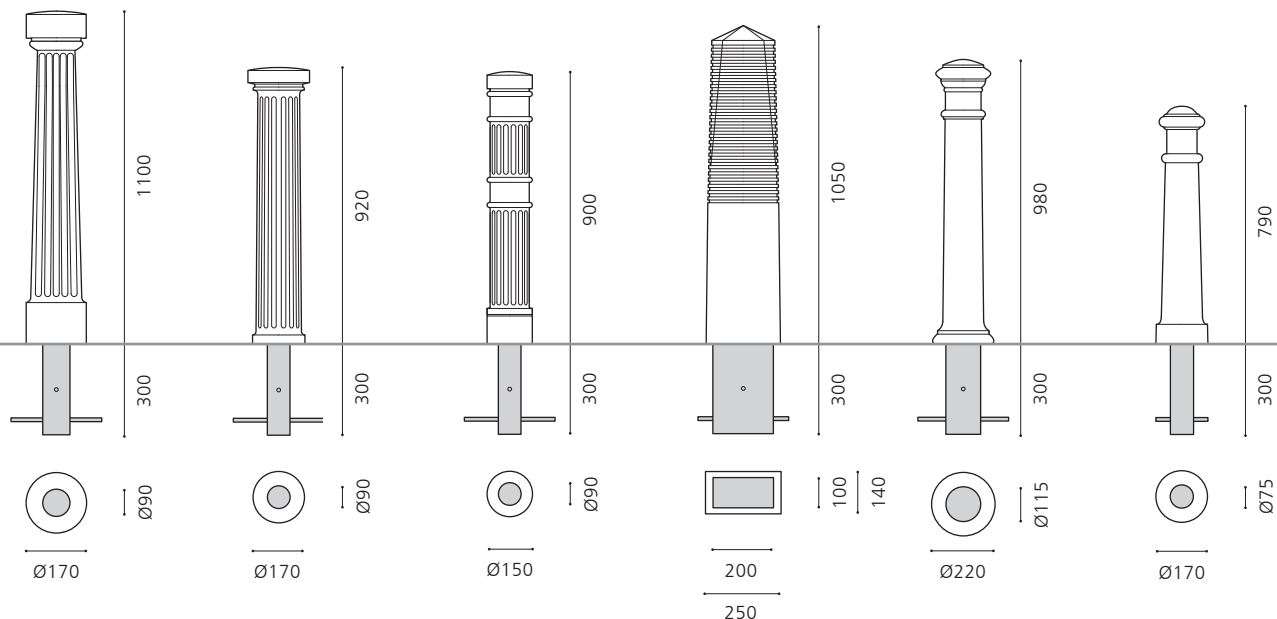
Reflective tape in a wide range of colours can be applied to most bollards to improve their night-time visibility

Crests

Borough crests or corporate logos can be cast integrally on most bollards and emphasised in contrasting colours



POLYURETHANE BOLLARDS



BERESFORD POLYURETHANE (PU)

BER 001

Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

DORIC POLYURETHANE (PU)

DO 0520

Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

TRANSPORT POLYURETHANE (PU)

TRL 900

Polyurethane
elastomer bollard with
2 yellow reflective bands

OPTIONS:
Removable bollard

CITY POLYURETHANE (PU)

CIT 001

Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

MANCHESTER POLYURETHANE (PU)

MAN 001

Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

CANTERBURY POLYURETHANE (PU)

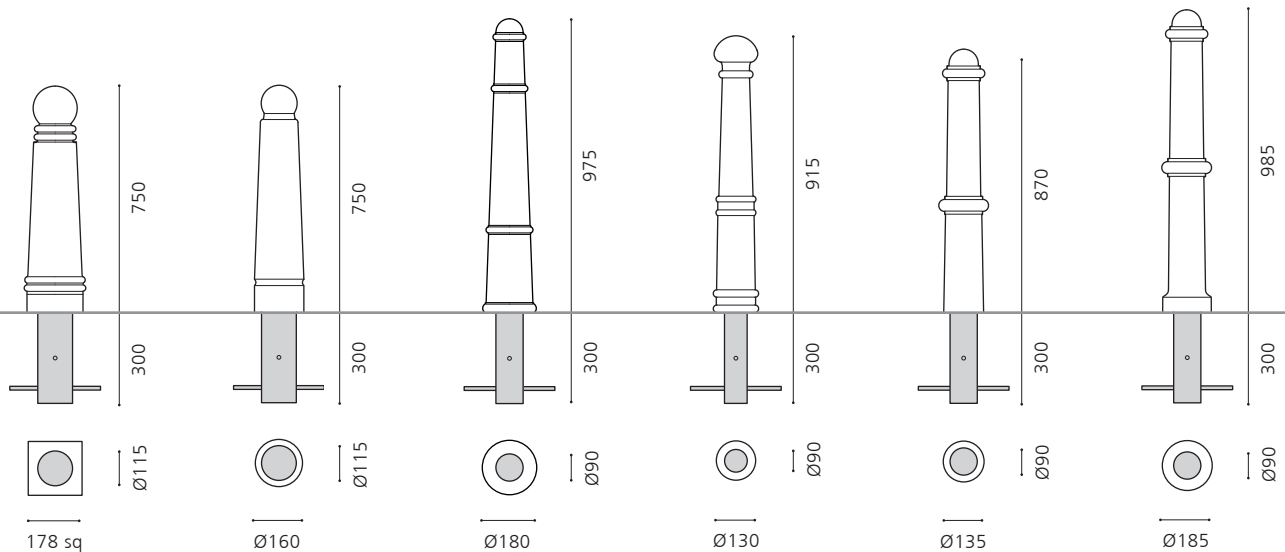
CTB 001

Polyurethane
elastomer bollard

OPTIONS:
Removable bollard



POLYURETHANE BOLLARDS



BATTLE POLYURETHANE (PU)

BA 0750
Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

GUNNER POLYURETHANE (PU)

GU 0503
Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

LEWISHAM POLYURETHANE (PU)

LEW 001
Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

EDINBURGH POLYURETHANE (PU)

ED 0526
Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

WARMINSTER MED. POLYURETHANE (PU)

WAR 0811
Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

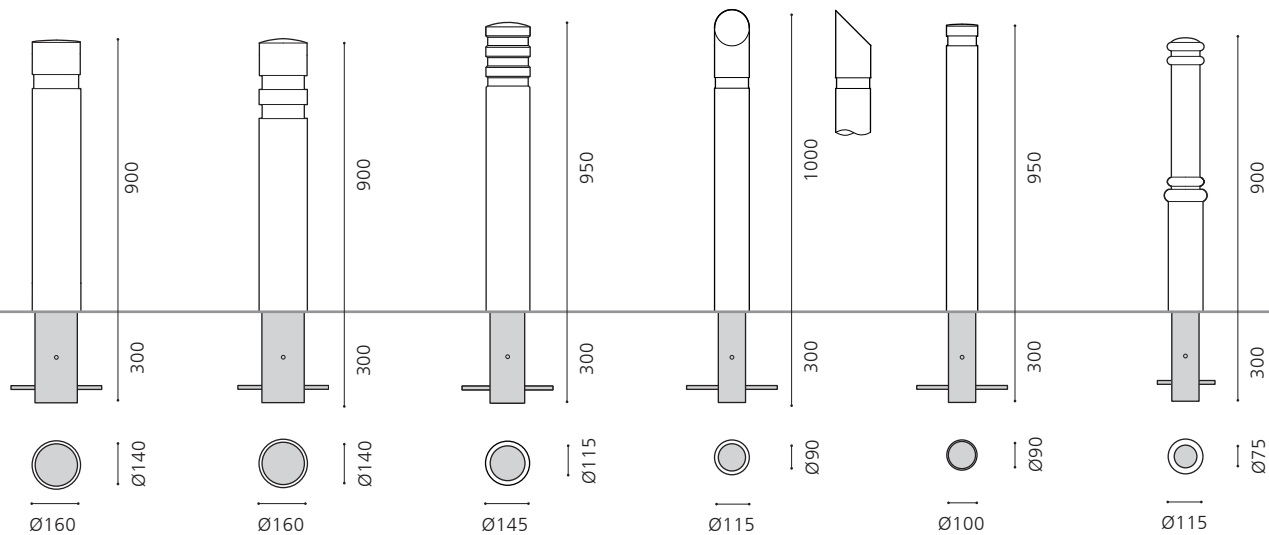
WARMINSTER LRG. POLYURETHANE (PU)

WAR 002
Polyurethane
elastomer bollard

OPTIONS:
Removable bollard



POLYURETHANE BOLLARDS



KENTON SINGLE POLYURETHANE (PU)

KEN 001

Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

KENTON DOUBLE POLYURETHANE (PU)

KEN 002

Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

WATFORD POLYURETHANE (PU)

WAT 145

Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

CRAWLEY POLYURETHANE (PU)

CRW 115

Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

CREWE POLYURETHANE (PU)

CRW 815

Polyurethane
elastomer bollard

OPTIONS:
Removable bollard

EGHAM POLYURETHANE (PU)

EGH 001

Polyurethane
elastomer bollard

OPTIONS:
Removable bollard



POLYURETHANE BOLLARDS - SPECIFICATION & INSTALLATION

General specification

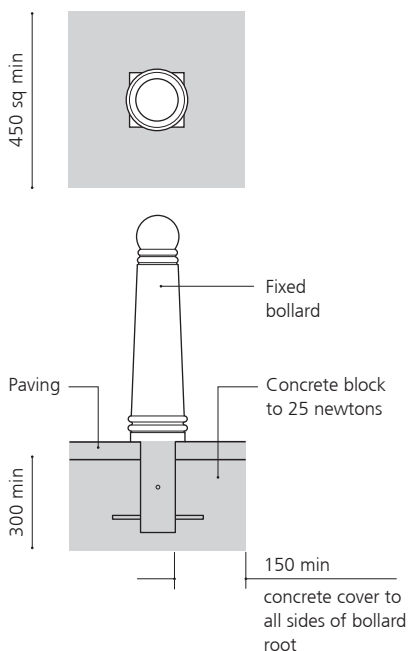
Bollards are manufactured from a tough, durable engineering grade polyurethane cast over a tubular steel core. PU bollards are finished in a two pack polyurethane gloss coating to any RAL or BS 4800 colour reference.

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:

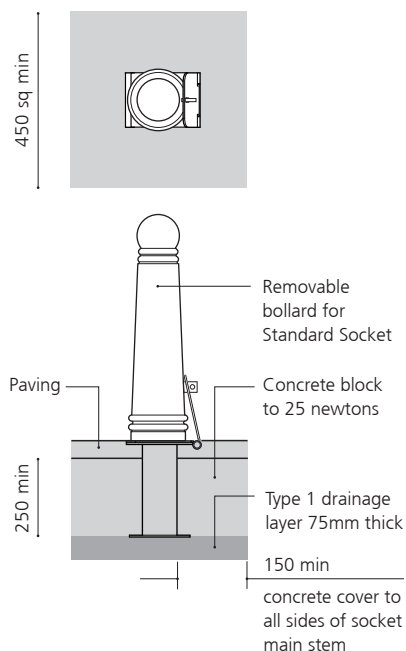
- Set the bollard at the depth / height as shown in the specific bollard illustration
- Ensure concrete is well compacted around and between the tie bars on the bollard root

FIXED BOLLARD



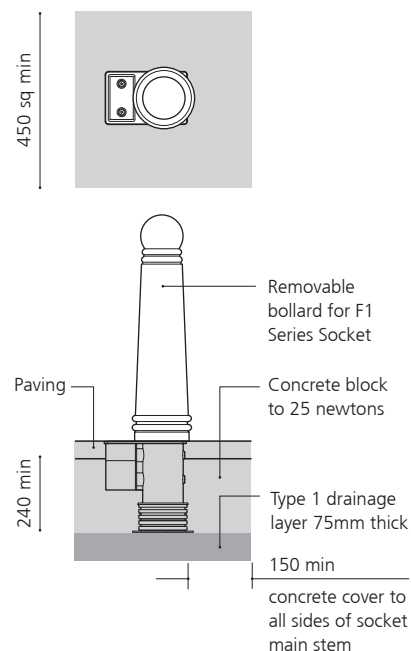
The professional advice of a highway / civil engineer should be sought if there are any queries regarding the ground conditions or doubts over the suitability of the foundation.

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

REMOVABLE POLYURETHANE 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. All of our PU 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. For both socket options and most bollards, the steel core of the bollard also serves as the spigot for insertion 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

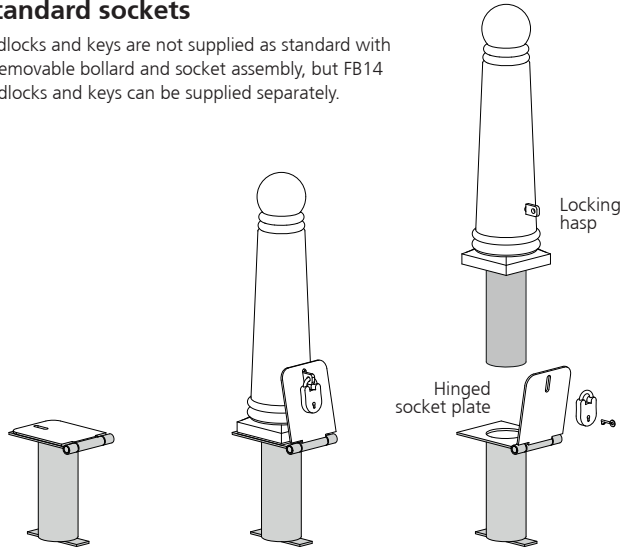
- Neat flush-fitting solution constructed in heavy duty cast steel and hard-wearing plastics
- Takes longer (than standard socket) to insert / remove bollard, so may not be suitable for emergency vehicular routes or when bollard needs to be removed frequently
- Circular bollard spigot locates in circular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



REMOVABLE POLYURETHANE 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.



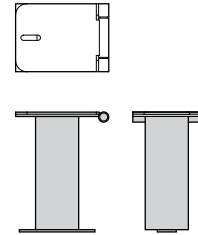
Closed socket

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.

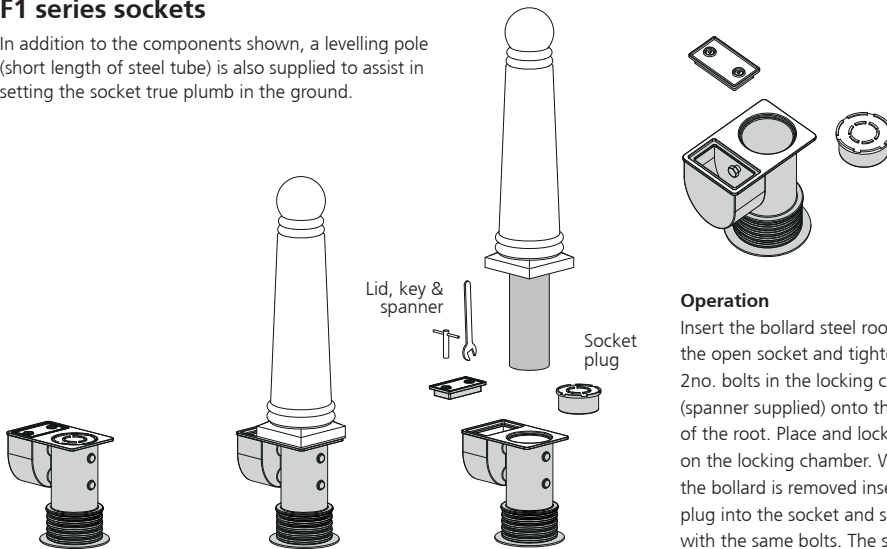


Dimensions

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 approximately 300mm 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.



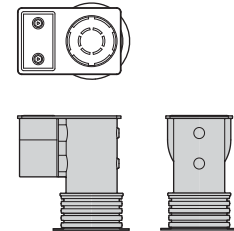
Closed socket

Secured bollard

Bollard removal

Operation

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

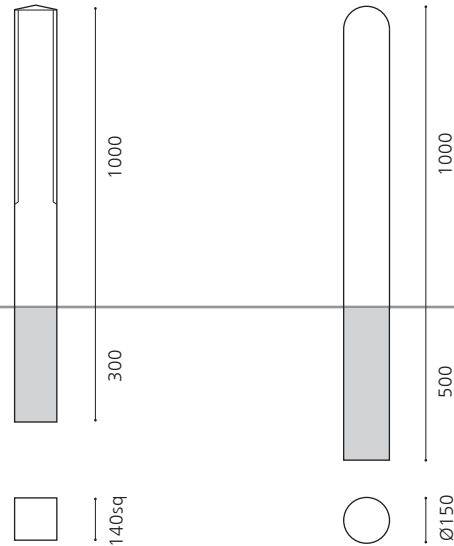
The plan dimensions of the socket depend on the bollard type, size & shape at ground level - if these dimensions are important to you please contact us for details. For all sockets, the below ground socket root is typically 300mm deep.

ABERDEEN RECYCLED PLASTIC BOLLARDS



Eco-friendly & economic bollards

Furnitubes offer an economical range of recycled plastic bollards, which provide a durable, environmentally friendly option for a wide range of developments and even temporary sites. The recyclable bollards are long lasting, robust, UV stable, splinter and knot-free and therefore very low maintenance. Made from high quality pre-processed recycled plastics, the bollards can be treated the same way as timber bollards, allowing screw-in connections for chains and signs, as well as the application of reflective tape.



ABERDEEN SQUARE

ABR 140

Recycled plastic bollard, hollow form
Graphite black colour

ABERDEEN CIRCULAR

ABR 150

Recycled plastic bollard, hollow form
Grey or brown colour

ABR 150 BLACK

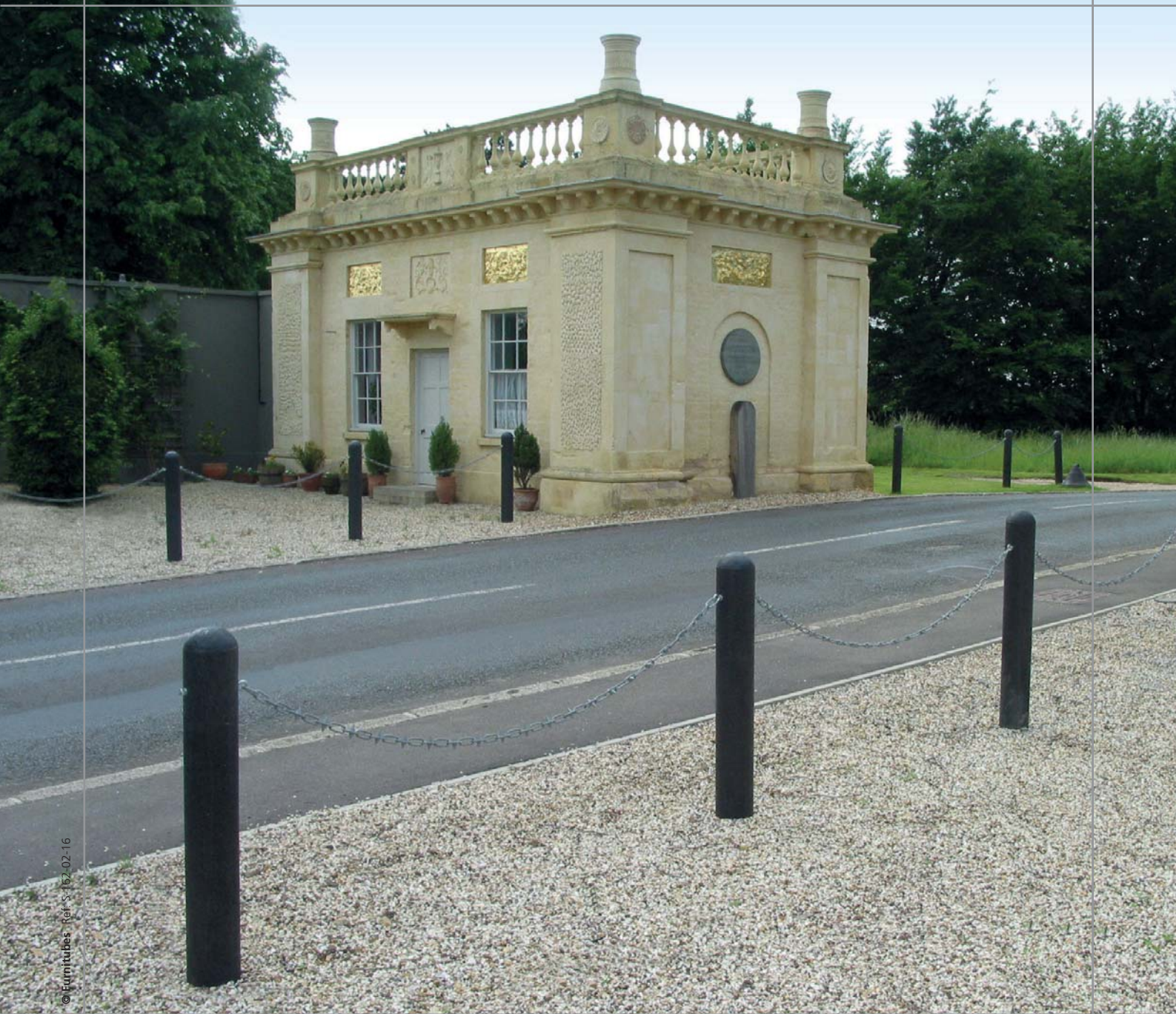
Recycled plastic bollard, solid form
Graphite black colour

OPTIONS (ALL MODELS):

Machined groove(s) with optional reflective tape
Reflective discs



ABERDEEN RECYCLED PLASTIC BOLLARDS



POLYURETHANE & RECYCLED PLASTIC BOLLARDS



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

www.furnitubes.com/brochures



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