



# APEX SHALLOW MOUNT BOLLARD



Heald's Apex Static Bollard provides a shallow mount solution which is flexible and can easily adapt to a wide variety of locations due to its modular design.

The Apex Bollard was designed to enable simple and fast bollard installation in either a straight line or a curved array. The circular bollard is suitable for a variety of aesthetic finishes and covers, providing a seamless perimeter to both historic and contemporary architecture.

### TESTING

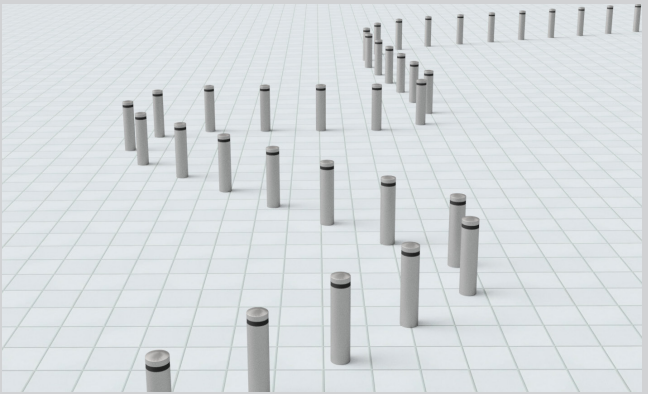
The Apex was tested in an array of 3 bollards, with the vehicle impacting perpendicular to a single bollard to offer maximum protection. The modular design means that the bollard line can be extended to provide protection along the full perimeter.

### INSTALLATION

Apex Bollards are easy to install with an excavation depth of only 150mm. The bollards are simply positioned with no pinning required and then secured in place with a concrete backfill. The surface can be finished with tarmac or pavers to create smooth integration with any landscape .

**Crash test results**  
Tested to the new stringent IWA standards using a 7.2tonne vehicle travelling at 64kph (40mph).  
*The bollard and foundation remained intact offering continued protection to the site.*

**Classification**  
IWA 14-1:2013 Bollard V/7200[N2A]/64/90:3.7 (minimum array of 3)



Designed to provide a curved bollard array with a shallow foundation.

Bollard Height	1020mm (without cover)	Internal Fitted Radius	1550mm (minimum)
Bollard Diameter	220mm (without cover)	External Fitted Radius	800mm (minimum)
Bollard Spacing	1200mm (between bollards)	Base Plate	100mm
Excavation Depth	150mm	Options	Various covers available Compensated covers

Please contact for further details:  
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UK Design number: 6145254



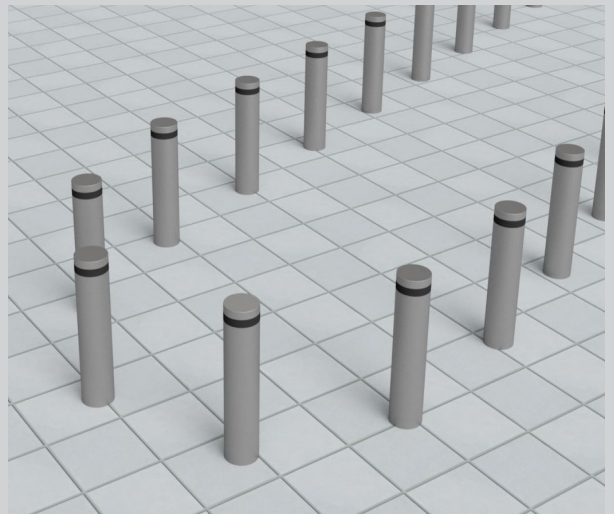
Due to a continuous program of development Heald reserve the right to change specifications at any time.

### CREATING A CURVED ARRAY

Due to the unique design of the Apex bollard, tight curves and 90 degree angles are achievable without any modification to the bollard base. The bollard is mounted onto the base plate which is elongated to the rear of the product. Due to this shape, there are two maximum achievable radii for the curvature of the bollard line; this can be either towards or away from the protected area.

### INTERIOR FITTED RADIUS

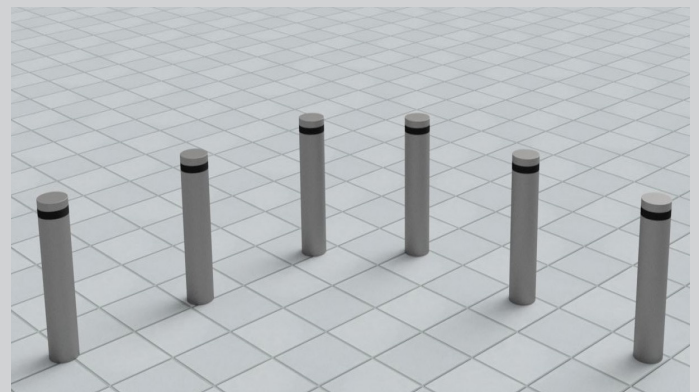
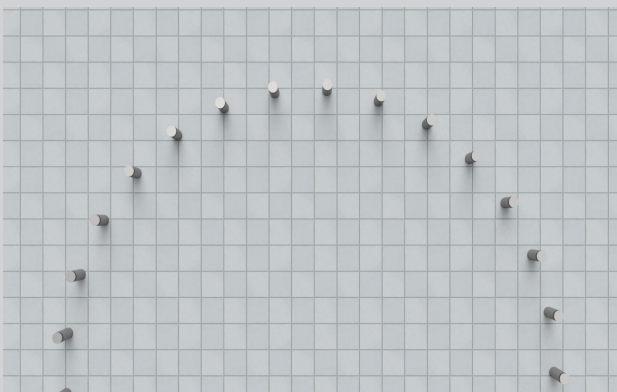
This describes the curve radius with the bollard line contouring in towards the protected area within the perimeter. The minimum achievable radius is 1550mm, whilst maintaining PAS69 recommended 1.2m spacing between bollards.



### EXTERIOR FITTED RADIUS

This describes the curve radius with the bollard line contouring away from the protected area within the perimeter. The minimum achievable radius is 800mm, whilst maintaining PAS69 recommended 1.2m spacing between bollards.

Perpendicular bollard lines should be constructed on the external face of the bollards.



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