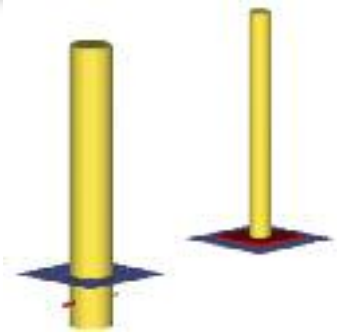




BOLLARDS

RAM RAID DETERRENTS, TRAFFIC MANAGEMENT AT SCHOOLS, CAR PARKS, COUNCIL BUILDINGS, SHOPPING CENTRES, PUBLIC AREAS & PATHWAYS

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Standard sizes

Bollard Height (m)	Ref	Embedded length of post (mm)	CHS Post Section (mm)	RHS Post Section (mm)	Feature	Finish
0.9	B1	350	76.1 - 168.3	70 - 200	Flat welded cap	Galv or Galv & PPC
0.9	B2	350	76.1 - 168.3	70 - 200	Sloped top welded cap	Galv or Galv & PPC
0.9	B3	350	76.1 - 168.3	N/A	Welded cap & decorative rings	Galv or Galv & PPC

Gramm Barrier Systems **BOLLARDS** have been designed specifically to protect infrastructure from vehicular attack, whilst maintaining the most stringent aesthetic requirements and are capable of being installed into utility rich, undulating shallow substructure.

The vandal resistance of galvanized steel bollards makes them ideal for most anti-ram and security applications.

Heights

Typically 0.9m but manufactured to suit customer requirements.

Construction

Mild steel with welded cap and optional decorative features. Post top can also be left open for concrete filling if required.

Finish

Galvanized only or Galvanized and Powder Coated.

Bollard Section

76.1mm CHS for general purpose applications.
Larger sections for added security.

Positioning

Typically around 1.5m gap between bollards to restrict vehicle access.

Fixed and Baseplated bollards

Gramm Barrier Systems **BOLLARDS** are a cost effective range to meet industrial and commercial requirements.

These can be supplied for traffic controls and property protection around sites. All can be supplied in a galvanized only finish or galvanized and powder coated finish. The fixed bollard needs to be concreted into the ground and the base plated bollard needs to be fixed to an existing concrete foundation.

