

SafeStop Bollard: Dual-purpose Impact Dissipation Bollard

SafeStop Bollard features 3D auxetic materials with exceptional impact dissipating capabilities, effectively absorbing vehicle kinetic energy. The unique structure cushions impact a minimises acceleration forces on drivers and passengers, providing the highest level of safety. SafeStop has been certified through full-scale impact tests that comply with international standards. SafeStop's compact, shallow foundation design ensures seamless installation in urban areas and along roadways.

Industry Challenges

- Traditional bollards rely on massive foundations to stop a moving vehicle. However, the impact of the collision leads to vehicle deformation, which inevitably endangers drivers and passengers
- Over one-metre foundation depth complicates installation, especially in urban areas with congested tube systems

Major Benefits

- 0.5-metre shallow foundation proven to stop a 7.5 ton truck at 48 km/h
- Certified Class A occupant safety, ensuring maximum protection for passengers
- Fully compliant with PAS 68 international standard, validated by full impact test

Application Areas

- Bus stops
- Road intersections
- Pedestrian streets
- Mountain roads
- Expressways

Collaborator(s)

Manufacturers of environmental and public health engineering, rotational molding, automotive and commercial vehicle components

Award(s)

R&D 100 Awards, Edison Awards,
International Exhibition of Inventions Geneva



ASTRI's SafeStop Bollard is the world's first dual-purpose bollard

