

Bollards. Bollards?? BOLLARDS!!!



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A brief guide on what bollards are and what they do. This includes the different types, their uses, looks, and different model types from FAAC. This guide will also cover the importance of ASTM, IWA, and PAS, and M30/M50 crash ratings.

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What is a bollard?

A bollard is a high-strength vehicle barrier, typically a large metal cylinder, that acts as heightened security access control for numerous facilities. The goal is to ward off oncoming vehicles and often times stop them dead in their tracks. This is due to the heavy, crash resistant design of most bollards.

Security

Bollards are ideal security devices for protecting your facility from trespassers wanting to breach your perimeter with a car, truck, or other large vehicle.

Access Control

Bollards can also help provide access control, limiting who has vehicle access and when. This keeps traffic flowing where you want it, when you want it.

Safety

Bollards create clear points of access, keeping guests away from unsafe areas. This keeps both you and any drivers safe from being in unauthorized areas.



Where are bollards usually found?

Bollards can be found just about anywhere including industrial, commercial, government, or even residential areas. The goal is safety in all areas with, varying levels of security determined by the type of bollard you may come across. They are most commonly found outside of commercial buildings, government facilities, stadiums, storefronts, universities, shopping streets, and more.

What do bollards do?

Bollards physically don't do anything but sit in one spot. Some can retract, some can be removed, and others are permanent fixture, but in all cases, they don't "do" anything. The reason for this is that these bollards extremely thick, heavy pillars made of steel are designed to stop even the largest vehicles from crashing into unauthorized areas. There are 4 types of bollards:

- Automatic
- Fixed
- Semi-Automatic
- Removable

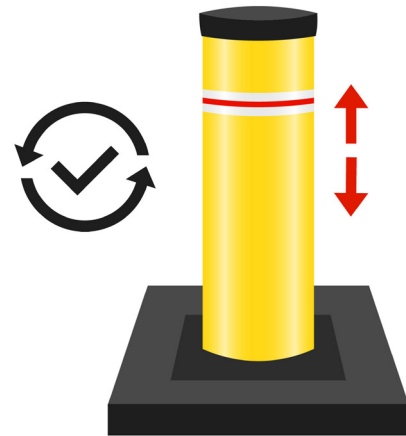


[FAAC Bollard Overview](#)

Automatic Bollards

Automatic bollards are in-ground units that are designed for intensive use in commercial, industrial, and urban restricted access areas. They can be raised and lowered at the push of a button as they are electrically connected. They move using a hydraulic system and are lowered into a bollard pit below ground.

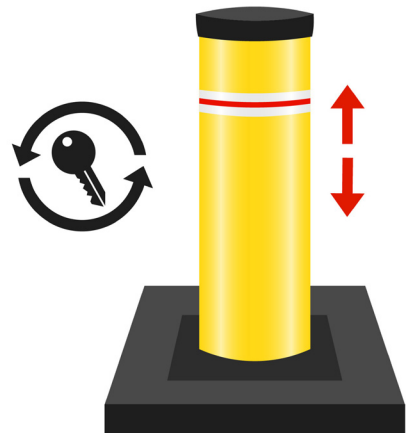
These bollards are ideal for limiting access for vehicles at designated times for things like events, deliveries, traffic control, and more.



Semi-Automatic Bollards

Much like automatic bollards, semi-automatic bollards are in-ground units that are designed for intensive use in commercial, industrial, and urban restricted access areas. They can be raised and lowered manually using the key-operated hydraulic system.

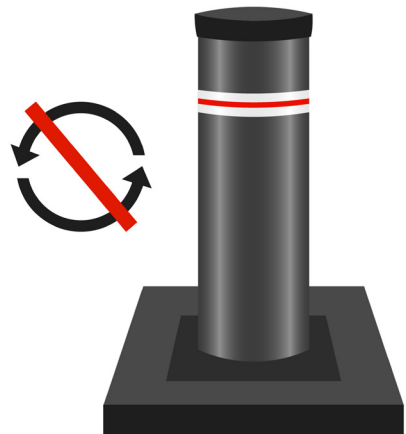
These bollards are a cost effective and electrically independent method for access control. They are best used in commercial areas such shopping streets, gated communities, marinas, stadiums, and more.



Fixed & Removable Bollards

Fixed and removable bollards are completely manual units that much like their siblings are ideal for protecting commercial, industrial, and urban restricted access areas. These units are entirely stationary, remaining above ground constantly unless removed in the case of removable bollards. While also fixed in one position, they can be removed (leaving the concrete pad behind) and stored to grant public vehicle access.

These bollards are best for saving costs on permanent or long term access control at certain entry points and ensuring safety.



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& Traffic Bollards](#)

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Bollards: Crash Ratings & Testing

The strength of a bollard is tested by a number of factors by three international organizations: ASTM, ISO, and BSI. They test for a number of things such as impact resistance, stopping speeds, bollard damage, etc. For maximum security, it's important to ensure your bollard is M30 or M50 (ASTM F2656-20) certified.



Damage from a standard vehicle



Maximum strength of a bollard

M30 Crash Rating

M30 crash rating is rated by the ability of a given HVM (Hostile Vehicle Mitigation) device such as a barrier arm, gate operator, or in this case a bollard, to stop a 7.5-ton truck within one meter (3.28') going at 30mph.

M50 Crash Rating

M50 crash rating is rated by the ability of a given HVM (Hostile Vehicle Mitigation) device such as a barrier arm, gate operator, or in this case a bollard, to stop a 7.5-ton truck within one meter (3.28') going at 50mph.



ASTM testing measures protection against low-speed (<30 MPH) and high-speed impacts (up to 60 MPH) by vehicle type up to 65,000 lbs, impact speed, and penetration distance.



IWA 14 testing measures vehicle weight and impact speeds, performance classification based on penetration distance and vehicle immobilization and structural integrity of the bollard post-impact.



PAS 68 testing measures the weight and type of the vehicle used in the test, the speed at which the vehicle impacts the bollard, and the penetration distance of the vehicle beyond the bollard upon impact.

ASTM Crash Ratings

Vehicle Size	ASTM Standard	Penetration Rating	ASTM Speed Rating
Small Passenger Car 2,430 lbs	F2656 (M30/M50)	• P1 ≤ 3.3 ft • P2 3.31–23.0 ft • P3 23.1–98.4 ft • P4 > 98.4 ft	• M30 (30 mph) • M40 (40 mph) • M50 (50 mph)
Medium-Duty Truck 15,000 lbs		• P1 ≤ 3.3 ft • P2 3.31–23.0 ft • P3 23.1–98.4 ft • P4 > 98.4 ft	• H30 (30 mph) • H40 (40 mph) • H50 (50 mph)
Heavy Goods Vehicle 65,000 lbs		• P1 ≤ 1 ft • P2 1–4 ft • Failure ≥ 4 ft	• S10 (10 mph) • S20 (20 mph) • S30 (30 mph)

Crash Rating Information

FAAC Bollards Comparison by Model

	Bollard Type	Height	Protection Class
FAAC J200	Automatic	600 mm (~2 ft.)	N/a
FAAC J200	Semi-Automatic	600 mm (~2 ft.)	N/a
FAAC J200	Fixed	600 mm (~2 ft.)	N/a
FAAC J275 V2	Automatic	600/800 mm (~2 3/4 ft.)	N/a
FAAC J275	Semi-Automatic	600 mm (~2 ft.)	N/a
FAAC J275	Fixed	600/800 mm (~2 3/4 ft.)	N/a
FAAC J275 2K20	Automatic	800 mm (~2 3/4 ft.)	M30*
FAAC J275 2K20	Fixed	800 mm (~2 3/4 ft.)	M30*
FAAC JS48	Automatic	1000 mm (~3 1/4 ft.)	M50 P1
FAAC JS48 Emergency Fast Operation	Automatic	1000 mm (~3 1/4 ft.)	M50 P1
FAAC JS48	Removable	1000 mm (~3 1/4 ft.)	M30*
FAAC JS80	Automatic	1000 mm (~3 1/4 ft.)	M50 P1
FAAC JS80 Emergency Fast Operation	Automatic	1000 mm (~3 1/4 ft.)	M50 P1
FAAC JS80	Removable	1000 mm (~3 1/4 ft.)	M50 P1
FAAC JS80	Fixed	1000 mm (~3 1/4 ft.)	M50 P1

*M30 only when 2 or more bollards installed