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Retractable Bollards. How Do They Work and What Are the Benefits?

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Retractable Bollards are a desirable solution because of their convenience, versatility, and aesthetics.



Introduction

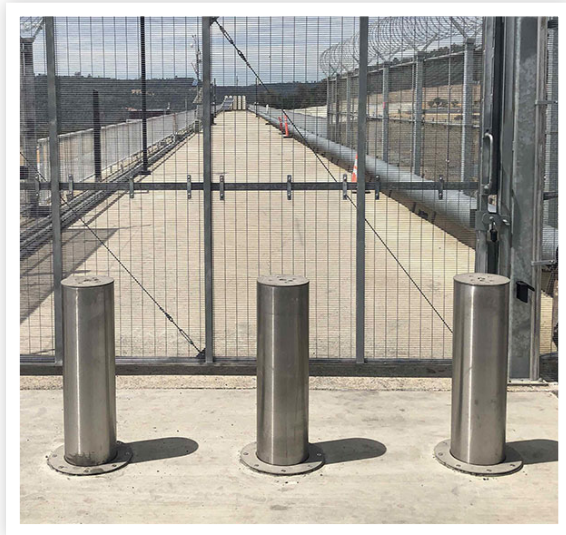
Retractable Bollards have become increasingly popular over the past several years for good reason. Their exceptional versatility and convenience help create a safe space for pedestrians, while still allowing for vehicle access for emergency vehicles, delivery zones, or limited-use roadways. Retractable Bollards, (also referred to as, automatic, telescopic, or collapsible) can be raised and lowered as needed via an access control device, controller, or secure operator panel.

How Do Retractable Bollards Work?

There are three main types of Retractable Bollards that are typically installed at medium to high-security facilities like corporate campuses, public event spaces, and government buildings:

Hydraulic

A Retractable Hydraulic Bollard System uses fluid, a generator, and a pump system. The fluid expands in and out of the system and pushes air to compress the motor cylinder. This type of operation is generally the fastest and the system can raise in just seconds.



Electric

A Retractable Electric Bollard System is driven by an electric motor that operates the cylinder piston to raise or lower the bollards. This type of operation has the most consistent speed and is often quieter when activated.

Pneumatic

A Retractable Pneumatic Bollard System uses compressed air to operate the cylinder piston, raising or lowering the bollards. This type of operation is the simplest, least expensive, and typically requires less maintenance over time.

What Are the Benefits of Installing Retractable Bollards?

Installing Retractable Bollards has many benefits on security and perimeter protection. Here are 5 benefits that make them a great solution.

Safety

Bollards provide reliable protection for pedestrians and buildings when the right Bollards are selected and configured with the assistance of a physical security engineer and designer. When installed properly by an experienced certified installer, Retractable Bollards can safely protect spaces where pedestrians and buildings are at risk of being struck by a vehicle. These spaces may include high-profile buildings, busy downtown streets, sidewalks, walkways, bike paths, crosswalks, and more.

Aesthetics

Some early models of Retractable Bollards were designed without taking into consideration the visual appeal that architects were seeking. Over the years, many Retractable Bollard manufacturers have made improvements in surface finishes and architectural details. This has enhanced the aesthetics and visual accent of the surrounding landscape.

Versatility

Perhaps the biggest benefit of installing Retractable Bollards is their versatility to block or allow vehicle access to an area but still allow for pedestrian access.



Whether it's a delivery area, emergency lane, or limited access area, by lifting the Bollards, you block vehicle access, while collapsing them allows full access.

Durability

Retractable Bollards can last for many years and be an extremely reliable solution when maintained regularly by a professionally trained team. There are many excellent bollard manufacturers that have been around for decades and make durability a priority. When you install a high-quality Retractable Bollard, it becomes a long-term solution for the facility.

Convenience

Retractable Bollards are convenient for a few reasons, but the biggest is the ability to control the operation of the bollards through a touch screen, remote control, or operation panel. Not having to physically remove the bollard by hand each time you need access to the area, makes Retractable Bollards superior to Removable Bollards.



Are Retractable Bollards Crash-Rated?

The Department of State, Department of Defense, and ASTM certify many types of vehicle barriers, including Retractable Bollards. Certified Vehicle Barriers are “Crash-Rated,” meaning they have been tested in full field crash tests using a real vehicle. The tests verify their capabilities of stopping a vehicle at a certain speed and specific vehicle weight. Crash-Rated Retractable Bollards are reviewed annually by the Army Corps of Engineers and the Department of Defense to release an up-to-date DOD Anti-Ram Vehicle Barrier List each year.

The most common crash-rating standards for Retractable Bollards are the ASTM F2656-07 and ASTM F3016-14. These standards specify how top Bollard Manufacturers should crash test their products to verify their capabilities of stopping vehicles that strike them. ASTM F2656-07 is the standard test for most vehicle barriers. ASTM F3016-14 is designed to test a vehicle that is going 30 mph or less on impact.

Conclusion

With the advancements made by manufacturers over the past decade, Retractable Bollards have vastly improved in performance and aesthetics. It has become an increasingly desirable solution for many facilities like corporate campuses, stadiums, public event spaces, and government buildings.

As always, it is wise to consult an experienced physical security designer early in the decision process or if possible, during the design phase to ensure all details have been accounted for. Sloan has in-house designers and engineers that will assist in the selection process and physical security design. It is becoming more common for architects, engineers, and construction companies to partner with Sloan Security Group to assist during the design phase and perform the installation and preventative maintenance to ensure success.

If you have questions about Retractable Bollards or need design or maintenance assistance, please contact us.



Contact

Sloan Security Group, Inc.
6828 W. Melrose St.
Boise, ID 83709
+1-888-382-8379

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