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When choosing an Automatic Gate for your facility, there are many factors to consider. Not all gate types are created equal, nor do they work optimally in each unique setting and access control scenario.



Introduction

There are 6 main types of Automatic Gates that are typically installed at commercial and industrial facilities. The slide gate, swing gate, cantilever gate, bi-folding gate, and vertical pivot lift gate. These all are designed with different advantages and disadvantages and the right choice depends on several factors.



Slide Gate

The slide gate is often the most popular type of automatic gate that is used at light-duty commercial facilities. The gate moves horizontally across the gate opening on rollers at the bottom that support and guide its path. The rollers typically ride along a metal track installed on the road across the gate opening. Because slide gates use rollers on a track, they are vulnerable to accumulating snow, ice, and debris in their path, causing a malfunction. It's also possible for unwanted friction to occur which forces the gate operator to work harder to open and close the gate. Some gate operator manufacturers can sometimes discourage the use of slide gates if this is a concern. Slide gates can be referred to as rolling gates or v-track gates.







Swing Gate

Swing gates are most often used in lighter security options due to their lower cost, easier installation, and security limitations. Swing gates open away or towards the entrance in an arc which means that adequate space must be available to allow for vehicles to stop a safe distance from the gate while the gate swings open or swings close. Because of the swinging arc of the gate, the risk is higher for vehicleto-gate collisions and a higher risk of pedestrians being struck or trapped by the moving gate. Additional signage and other safety measures may need to be implemented to reduce the chances of an accident occurring.

Cantilever Gate

A cantilever gate differs from a slide gate, in that it removes the need for rollers and is supported by heavy steel hinges to open and close the gate while the gate is suspended off the ground. Because of the simplicity of the design, cantilever gates are often considered more reliable than slide gates and are commonly used for industrial facility access control points to reduce maintenance and repair costs. Cantilever gates have maintenance advantages over many slide gate designs by having a narrower overall width and a trackless design.

Bi-Fold Gate

A bi-fold gate is a self-supporting and accordion folding gate design that can open in either direction. Like many other types of folding gates, it is self-supporting and does not require the use of posts at each end of the gate opening. Typically used in smaller entrance scenarios, bi-fold gates also don't need tracks or posts, which can help save money upfront. Bi-folding gates are also some of the fastest opening and closing options for an access control point. The folding design also creates a high level of security because it sits closer to the ground and is generally more difficult to break through.



Vertical Pivot Gate

A vertical pivot lift gate is an excellent alternative to a vertical lift gate. If you are trying to cover a large-sized entrance area, the design makes it possible to install a lift-style gate without interfering with existing landscaping or potential overhead conduit. The vertical lift angle provides a nice balance between the benefits of a standard vertical lift gate and those of a horizontal lift gate. This self-retracting gate design provides the best of both worlds.

Key Considerations When Selecting an Automatic Gate Design

To better understand which of these Automatic Gate designs is right for your facility, here are 10 things you should know before you select a gate for your business.

1) Opening Size

The overall size of the opening where the gate will be installed will be a key factor when choosing which type of automatic gate to



have installed. While gate widths of over 80' are possible, any gate width over 40' tends to be very expensive and often leads to many operating issues.

2) Road Grade of Opening

Most gate operators are designed to open and close gates that are on a flat and level grade. Automatic Gates opening and closing by raising and lowering that are installed on an incline can lead to excessive wear and tear on the gate motor and operator, leading to premature failure.

3) Spacing Around Opening

The amount of available space on all sides surrounding the gate can limit your choice of Automatic Gate that is able to be installed. A site that has plenty of space allows for more



options to be installed, but in downtown, urban, or crowded areas where space is limited, this lack of space may reduce your choice down to one or two options for Automatic Gates.

4) Opening and Closing Speed

While slower opening speeds can be acceptable for some light-commercial solutions, they are not a good choice in high-traffic solutions such as at a distribution center, data center, corporate campus, or airport. When a gate closes too slow it can encourage "tailgating" and other security violations to occur.

5) Daily Cycle Count

How many times will the gate open and close each day must be considered when selecting the Automatic Gate style and the gate operator. Certain types of gate operators may only be designed to cycle several times per day or less. Access control points where a gate cycles up to hundreds of times per hour will need an industrial-grade operator.

6) Gate Design/Construction

Automatic Gates need to be specifically designed for automatic operation. Specific types of rollers, bearings and other small hardware from the manufacturers should always be used for safety and reliability. Using a manufacturer-certified installer who has access to properly installing these parts can make all the difference in how well the Automatic Gate performs.

7) Weight of the Gate

The weight of the gate will dictate which type and the quality of the gate operator will be needed. Typically, the wider and taller the gate, the more it weighs. However, gate weight can also depend on the materials used, like if it's made of steel or aluminum. The larger and heavier the gate, the more likely rain, snow, or ice may become a bigger issue if any accumulation occurs.



8) Weather and Climate

Extreme weather and different climates can play a

huge role in the installation process. Automatic Gates in areas where there are extremely hot or cold temperatures, high winds, or heavy snow or ice should be taken into consideration.

9) Safety and Location

Another key factor to consider is whether the gate is installed near residential areas where children are likely to be present or if it's being installed in a remote rural area. Each scenario will require a different safety plan and inform your choice of Automatic Gate design.

10) Electrical Power

This can be often overlooked, but commercial grade gate operators will generally require 220/240 VAC or three-phase electrical power specifications. Gaining access to this type of power at the location of the gate operator can add unforeseen more work to the installation.

Conclusion

When selecting your next Automatic Gate, it is wise to consult an experienced installer early in the decision process or if possible, during the design phase. Automatic Gates can not only be expensive to install but should also be maintained by a certified professional.

Sloan has in-house designers and engineers that will assist in the selection process. It is quite common for architects and construction companies to have the least expensive gate possible installed without considering all the factors listed above, which can often cost more on the backend with excessive repairs and maintenance.



If you are planning to have a gate installed at your medium to high-security facilities such as a corporate campus, data centers, energy facility, government facility, airport, or stadium, it is wise to consult with a professional security engineer to help analyze your needs with you and help you select the best Automatic Gate solution.

If you have questions or need assistance with your next Automatic Gate design or installation, please contact us.



Contact

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

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