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Automatic doors evolve to help improve safety, security, losses

By Thomas Cordeiro

There are many important factors that architects must consider when designing entrances to retail facilities; proximity to parking, egress patterns, height and width of doors, etc. But the most important factor should always be the safety and well-being of customers once the retail location is open to the public. The installation of automatic doors is the pre-eminent choice of architects for just this reason.

Automatic doors provide all customers with a safe and easy egress opportunity. Automatic doors, either full energy or low energy, enable the handicapped and elderly to easily enter the retail location and enjoy the same shopping experience as other customers. Automatic doors provide store owners with the ability to control traffic patterns through the use of rails and bars and reduce unnecessary accidents by customers. These are features that should be considered during the design and engineering phase of a project.

And once construction is complete, retail store owners should consider a diligent preventive maintenance schedule and daily safety check program to optimize the safety and security of their customers. Owners are able to take advantage of preventive maintenance programs offered by major door manufacturers to ensure that the automatic doors are functioning smoothly and efficiently throughout the product life cycle.

Today's automatic doors are safer than ever before. Utilizing either infrared, microwave, or many times a combination of both, the automatic door sensors can detect motion of approaching people and react faster than ever, avoiding most customer accidents. Automatic door sensors detect motion and presence in the areas around the door and are designed in compliance with the **American National Standards Institute** A156.10; the American National Standard for Power Operated Pedestrian Doors. This document states; "requirements in this standard apply to power operated doors for pedestrian use, which open automatically when approached by pedestrians and some small vehicular traffic or by a knowing act. Included are provisions to reduce the chance of user injury or entrapment." The A156.10 standard covers only full-energy automatic doors.

ANSI standard 156.19 governs power assist and low energy power operated doors. All automatic doors must comply with requirements for opening and closing speeds and forces, breakout force, activation zones and safety zones, guide rails, and signage. The activation of a full energy automatic

door is accomplished through the use of a vision sensor, microwave sensor and/or infrared sensor or activation mats that detect individuals approaching the door.

Safety zone monitoring is typically accomplished through the use of vision sensors, or infrared sensors that sense objects in the threshold after the door has opened or in the case of certain swing door systems, is in the path of the opening or closing door. If the automatic door is a low energy system, activation is accomplished through the use of push buttons and radio controls. All major automatic door manufacturers must comply with these standards, as they provide general rules and guidance for the automatic door industry, but they are not the most important factor. Designing doors to meet these and other life safety codes is important, but the most important factor is protecting the public. And the best way to ensure the protection of the public is through a comprehensive and ongoing preventive maintenance schedule. This will ensure that the door package is functioning safely and efficiently.

Major manufacturers offer preventive maintenance programs and will visit regularly to provide this service. When making a choice for an automatic door provider, be sure to ask what preventive maintenance program they offer. Many times this will offer increased liability protection and save your company money in the long run.

Establishing a long term relationship for preventive maintenance with the automatic door manufacturer is important not just for the initial installation, but for the months and years to follow.

Most door manufacturers now offer an array of options specifically developed for loss prevention and as theft deterrents. Camera-based visual surveillance systems can be used for activation of the automatic door package and may also be used to record a wide range of events at the door including unauthorized entrance, loss prevention and the monitoring of intentional door tampering.

Jamb mounted cameras may also be an important addition to a new

or existing door package. This small camera placed in the door jamb provides a unique perspective on the door threshold and may be used for loss prevention and theft as well. The position of the jamb camera can, many times, identify individuals easier and faster than even camera-based surveillance systems due to their proximity to their intended targets.

If the surveillance camera is mounted high above the ground it is difficult to identify people, especially when they are wearing hats or scarves. But with a jamb mounted camera, these individuals can be identified more easily.

Integrated alarm contacts provide a high-level perimeter security and can be retrofit into almost any door package design. Alarm contacts, which provide the ability to monitor all door openings as well as a single circuit connection for security integrators, are easy to maintain, cost effective and are requested by some security professionals.

Other safety-related options such as integrated battery backup devices are also becoming more and more important in the retail environment. The ability to continue to provide power to the door package even during a complete power failure to the building is a good way to ensure safe and secure egress from the store during these occurrences.

It is important for architects and specifiers to take the time to consider the supplier that is selected as the automatic door provider. Working with a door manufacturer and in some cases a specific project management team within that organization, will help the architect to ensure they are making the right choice for their automatic entrance, and customize the package to meet their specific needs. They should be sure to consider a number of items when making that important choice:

Does the automatic door manufacturer produce the doors necessary for my application?

Does the manufacturer comply with the standards set forth by ANSI A156.10 for full energy doors and A156.19 for low energy automatic doors?

Will the automatic door manufacturer custom design doors to meet the needs of the architect/specifier and the customer as well?

Does the manufacturer offer a complete and scheduled preventive maintenance plan?

Does the manufacturer offer a specialized team of project management professionals that will manage my project and ensure that I am meeting industry codes and specifications, and in the case of major retailers, the specifications of my corporate office or headquarters?

Will the manufacturer work with me before the job is complete and after to offer a wide range of options for automatic doors targeted to meet my specific needs?

Does the manufacturer offer a telephone hotline for technical support and customer service that is available to me and my customer during extended business hours?

So the next time you are choosing an automatic door manufacturer for your retail construction job, be sure to keep in mind all the factors involved.

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