



Engineering

by Christopher Johnson

The "inns" and outs of automatic doors for hotels

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It's quiz time. What do these things have in common: in-suite coffee machines, cable TV, wireless Internet access and automatic doors? Give up? These are a few of the modern conveniences that hotels worldwide provide for their guests. And while none of the things on this list are required from a hotel, most are certainly expected.

Proof of this can be found in the results of a recent research project to understand the levels of importance, expectations and preferences for automatic doors among consumers. The research was conducted by The American Association of Automatic Door Manufacturers (AAADM).

Importance and need

The 447 participants were asked to assess the level of importance they put on automatic doors at various locations, specifically in hospitals, airports, hotels/motels, shopping mall entrances, retail stores, government buildings, office building, colleges/universities, full-service restaurants and fast food restaurants.

Almost 60 percent of the consumers surveyed expected to find automatic doors at hotels. And when participants were asked to name specific locations where automatic doors are essential yet not sometimes present, shopping malls, hotels/motels and post offices were mentioned the most.

Clearly, there is an unmet need for automatic doors in hotels. The reluctance of some hotel operators to install automatic doors could very well stem from a lack of understanding of the benefits, costs and other issues related to automatic doors. By developing a basic knowledge of these issues, hotel operators can more effectively determine that automatic doors are right for their facility.

Applications

Most often automatic doors are installed at the front entrances of hotels, though they are appropriate for, and are sometimes utilized in, other areas of hotels. Automatic doors can be installed as a part of new construction or can be retrofit to an existing application. The costs for installing automatic doors vary greatly depending on the application, style and size of the opening being outfitted. On a per use basis over the life of the door, the cost difference between an automatic door and a manual door is minimal.

Once you make a decision to install new automatic doors or retrofit your existing application, it is essential to work with a reputable, dependable supplier that will help you find the most ideal and cost effective automatic doors for your particular hotel application. Make sure the supplier fully understands and considers the traffic flow of your hotel, average types of users you expect and any aesthetic requirements or

Pictured below: The bi-part automatic sliding door at the entrance to this InterContinental® Hotel allows guests to enter and exit easily, even when their hands are carrying luggage.



preferences your hotel may have. With the many different colors, finishes and designs offered today, it's easy to find an automatic door that complements and enhances any hotel's unique style. Most importantly, be sure your supplier follows all applicable standards, including ANSI/BHMA A156.10, The American National Standard for Power Operated Pedestrian Doors. And be sure your installer is an AAADM Certified Inspector.

Types of automatic doors

Many people are surprised by the many choices that are available when choosing automatic doors. There are three major types of automatic doors: swinging, sliding and folding.

Automatic Sliding Doors: Automatic sliding doors are an extremely efficient way to handle simultaneous two-way traffic. This type of door can also be used to control directional traffic situations.

Automatic sliding doors are available in single slide, bi-part slide and telescopic slide configurations. As a rule, these are furnished as complete packages and can be surface mounted or concealed overhead (in-transom mounted). Slide doors typically include: an operator, header, track, carrier wheels, sliding door panel(s), sidelite panel(s), jambs, lock and activation/safety system. Other options are also available.

Automatic Swinging Doors: Single automatic swinging doors are typically used for directional or one-way pedestrian traffic. In most cases, one door is used for ingress and a separate door for egress.

Automatic full-power swinging door operators can either be supplied as complete packages, or simply as the operator with header and drive arm. They can be mounted as overhead-concealed operators for direct drive applications or surface mounted for push and pull applications. Swing door products are designed for single, pair or double egress applications.

When supplied as a complete package, this will generally include: an operator, header, door panel(s), jambs, finger protection [if applicable], lock, guide rails and activation/safety system. When existing door panels are used, an operator with header and drive arm are supplied - along with an appropriate activation and safety system. In all instances, guide rails may be required to protect the swing area of the door panel. If the doors swing against a natural protective barrier such as a wall, then perhaps the guide rails can be eliminated.

Automatic Folding Doors: Automatic folding doors are considered to be a space-saving option. A folding door requires minimal space to install, yet still provides an ample amount of clear door space.

Automatic folding doors are furnished as complete packages. This includes: the operator, header, pivot hardware, door panels, guide rails, lock and activation/ safety system. They are offered in either single fold or bi-fold configurations.

Energy costs

For the most part, most experts agree that the cost of operating automatic doors is low. A vestibule area, while not necessary, may reduce additional energy costs that sometimes results from loss of heat/cooling. Many businesses find that installing automatic doors actually *decreases* their energy costs, with or without vestibules. With an automatic door, instances of doors being left open accidentally by guests or not shut completely are eliminated. The energy costs associated with automatic doors differ significantly depending on the climate, traffic, setting and type of automatic doors being used. There are also a variety of low-energy door options available.

Low-energy swinging doors

Automatic low-energy swinging door operators are designed for applications requiring Americans with Disabilities Act (ADA) compliance or user convenience. This type of operator is usually activated with push plates. This enables able-bodied individuals to use the entrance as a manual door, while disabled people can use the automatic option. The unit includes the header, operator and drive arm.

Revolving Doors

Automatic revolving doors are manufactured as complete packages. In general, they are offered in four-wing, three-wing and two-wing designs. Larger diameter four-wing and three-wing doors can also offer center core displays. Two-wing doors typically have perimeter displays that serve as integral night shields when the door is closed and locked. Revolving doors can be center or perimeter driven – depending on size and design. As a rule, manual and smaller diameter automatic doors have center shaft drive systems. Larger diameter automatic doors have perimeter drive systems. Smaller diameter doors are typically offered in a security version for controlled access.

Installation

No matter the type or look of an automatic door, a trained technician should install the automatic door system so that it performs as the manufacturer intends. AAADM recommends finding and retaining the services of a technician who has been certified as an inspector by AAADM. AAADM Certified Inspectors typically provide maintenance, repair and annual inspections of automatic door systems.

Additionally, all doors should be designed so that traffic approaches the door in full view and users walk directly toward the door. It is essential that pedestrians have full visibility of the door and its markings. To this end, hotel operators must steer clear of placing vending machines, waste cans, or other large obstacles that have the potential of distracting users within four feet of the moving door.

AAADM's guidelines for automatic doors also include the following:

- The automatic door should be properly specified to suit the intended use, and the ANSI A156.10 Standard for Power Operated Doors should be followed.
- Planned maintenance and brief daily inspections are recommended. Daily safety check procedures are outlined on a label that can be obtained from AAADM or any certified inspector.
- Doors should be properly marked.
- Sensing systems should be checked regularly for proper operation.

Case closed

With over 50 billion safe automatic door openings and closings every year in the United States alone, automatic doors boast an exceptional performance record. Automatic doors are manufactured with sophisticated technologies that are selected by manu-facturers to provide efficient performance from each component of the door system.

Performance is enhanced when AAADM recommendations for proper installation and annual inspections, both performed by an AAADM-certified inspector, are followed. To learn more about automatic doors and download valuable literature, visit www.aaadm.com. ✧

(Christopher Johnson is the executive director of The American Association of Automatic Door Manufacturers (AAADM). AAADM is a trade association of manu-facturers of automatic pedestrian door systems that was founded in 1994 to promote safety in the manufacture and operation of automatic doors throughout the industry. To learn more about automatic doors and their application and maintenance in your hotel or to locate an AAADM Certified Inspector in your area, visit their website at www.aaadm.com.)