



# REVOLVING DOORS TURN ENTRANCEWAYS INTO ENERGY SAVERS

*How people get in and out of a building can have a big effect on how green a property really is. Revolving doors can be a part of a property owner or manager's energy efficiency strategies, since they can reduce the amount of hot and cold air getting into a building, while still being accessible for occupants. Jay Lowe of Rhinotek Solutions explains why revolving doors can be a green choice, and what property managers should consider if making the switch.*

**WHAT BENEFITS DO REVOLVING DOORS HAVE FOR BUILDING OWNERS AND MANAGERS?**

Revolving doors are always open to people, and always closed to outside elements. Not only do they eliminate drafts and minimize both noise and air pollution, but they also keep out dirt and debris.

They also reduce stack pressure, which is caused by a difference in outdoor and indoor air density or pressure. As the pressure is negative or positive, it naturally is trying to equalize. This is eliminated with revolving doors. The indoor and outdoor air pressures do not cross paths simply because with a revolving door there is always a constant seal.

Revolving doors can also reduce energy usage in a building. Swing doors or sliding doors allow cold air into the building in the winter and hot air into the building during the summer. This causes the thermostat to sense a temperature drop or rise, and the HVAC system to turn on. In contrast, revolving doors are extremely well sealed all the time, regardless of whether they are in use or not.

In fact, some doors can actually produce energy by harnessing the constant revolutions and store this energy to power LED lights inside.

Finally, they offer more useable space at buildings entrances compared to vestibules.

**ARE ENERGY SAVINGS MORE PRONOUNCED DURING CERTAIN TIMES OF THE YEAR?**

During periods of extreme heat or cold, energy savings will be most pronounced. A widely cited study conducted at the Massachusetts Institute of Technology showed potential annual energy savings of 74 per cent when a revolving door entrance was used instead of a swing door to access a building on campus. On average, eight times as much air is exchanged when a swing door is opened as opposed to a revolving door.

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**IF MANAGEMENT IS INTERESTED IN INSTALLING A REVOLVING DOOR AT THE BUILDING, WHAT KIND OF WORK IS NECESSARY? WHAT ARE THE COSTS?**

Generally, as long as the floor is level and the existing vestibule entrance can be removed and replaced with a revolver, the cost incurred will be that of the revolving door and removal of existing structure.

In many cases, there may be additional curtain wall to be installed to allow the revolver to fit the existing dimensions.

There are many variations to consider which will have an effect on the budget, such as the size and type of door to accommodate needs, the type of facade used, whether the door is automatic or manual, or if the door is for security or architectural purposes.

**ARE THERE ANY INCENTIVES FOR MANAGEMENT TO INSTALL REVOLVING DOORS?**

Revolving doors are considered a "green" product. Some companies are able to provide accurate information on the

recyclability of their revolving doors. This information can be used to obtain building certification according to environmental standards such as LEED or BREEAM.

**WHAT ARE THE DIFFERENCES BETWEEN AUTOMATIC REVOLVING DOORS AND MANUAL REVOLVING DOORS?**

Manual doors are a good application for low to medium two-way traffic. They are more economical than automatic revolving door. This can eliminate user confusion or hesitation upon approaching the door. It also lets users to set and keep pushing the door, as opposed to waiting for it to turn. And with power assist, these doors keep users moving with minimal effort.

Automatic doors are a good application for medium to high traffic. Activation sensors and rotations speeds can be adjusted to meet traffic flow. When used

with wider diameter doors, they provide ease of entry for people with luggage or packages. They can also be used along with security applications such as card readers or retina scanners.



**HOW CAN MANAGEMENT ENCOURAGE TENANTS AND OCCUPANTS TO ACTUALLY USE THE REVOLVING DOORS INSTEAD OF THE STANDARD ONES LOCATED AT A BUILDING'S ENTRANCE?**

For new installation, a qualified team will provide training to assist and encourage use of the revolving door. Display signage can be used to encourage users to select the revolving door rather than a sliding or swing door. Finally, it is important to generate traffic flow through the revolver, since it has been observed that if a few people use the revolving door more people will follow. ■

JAY LOWE IS THE DIRECTOR OF RHINOTEK SOLUTIONS INC. RHINOTEK SOLUTIONS SPECIALIZES IN REVOLVING AND AUTOMATIC DOORS, AND HAS MORE THAN 25 YEARS OF EXPERIENCE IN THE INDUSTRY.




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