

Additional Information about the Low Energy Operator Standard:

The basic principles of the Low Energy Swing Operator provisions:

- Operator is to be activated by a Knowing Act
- Minimum 5 second time delay after the door is full open
- Slow opening and closing speed in the area of four seconds (varies by door weight)
- Maximum force exerted by the operator to open or close the door of 15 pounds

If additional safety is desired for a specific application, sensing devices can be added, but the time delay must remain at five seconds minimum.

Additional Information about the Revolving Door Standard:

The following types of revolving doors are addressed in the proposed standard A156.27 for Power and Manual Operated Revolving Doors are

- Manual Revolving Doors
- Automatic Revolving Doors with a Center Shaft (defined as a rotating center, 12 inches or less in diameter, to which the wings are attached)
- Automatic Revolving Doors with a Core (defined as the rotating central portion, greater than 12 inches in diameter, of a large diameter revolving door to which the wings are attached)
- Automatic Two Wing Revolving Doors
- Access Controlled Revolving Doors
- Access Controlled – One Way Free Passage (Airport Access)

Key provisions in the standard address the following items for each type of door:

- Signage
- Glazing
- Clearances
- Starting Force
- Slow Speed Operation and Activation
- Wing Sensor Requirement when Required
- End Wall and Bottom Rail Sensors
- Kinetic Energy Requirements
- Door Out of Position Requirements
- Emergency Stop Switch
- Activating Devices

The standard will include an appendix containing many drawings and charts to help explain the standard's provisions.

Included in the provisions is maximum door RPM that varies with door size and kinetic energy limits. The RPM of the doors is based on the walk speed of a person walking at the outer end of the wing. Automatic doors are based on a walk speed of 3 feet per second and

the manual door is a little faster at 4 feet per seconds (which is currently in the model building code charts).

Many standards include limits of kinetic energy allowed when the door comes in contact with a person. For example, the ANSI A156.10 standard is based on a maximum of 2.5 foot pounds of kinetic energy. This limit has been in the UL 325 standard for pedestrian doors for years (UL 325 is the Underwriters Laboratories standard that manufacturers must meet to get their products listed). The writers of the revolving door standard followed that guideline and developed a formula to calculate the maximum RPM at a point of contact with a person.

Wing sensors can be used to slow the door from its normal run speed (RPM) to the maximum kinetic energy provision. Weight and speed of travel are two main elements of the kinetic energy formula. Manufacturers will provide a chart with their installation instructions to tell the person setting the door speed or doing the inspection what the maximum kinetic energy speed can be (manufacturers likely will provide the information as RPM rate so it can be measured in the field).

The appendix includes a note that factory-authorized installers should adjust automatic revolving doors before placing into operation.