

ANSI/BHMA A156.27-2019

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POWER AND MANUAL OPERATED REVOLVING PEDESTRIAN DOORS



SPONSOR
BUILDERS HARDWARE MANUFACTURERS ASSOCIATION, INC.

AMERICAN NATIONAL STANDARDS INSTITUTE
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FOREWORD (This Foreword is not a part of ANSI/BHMA A156.27)

The general classification of builders hardware includes a wide variety of items which are divided into several categories. To recognize this diversity, a sectional classification system has been established. Section P, Power Doors and Components is one such section and this Standard is a result of the collective efforts of members of the Builders Hardware Manufacturers Association, Inc. who manufacture this product. The total Product Standards effort is, therefore, a collection of sections, each covering a specific category of items.

Performance tests and, where necessary, dimensional requirements have been established to ensure a degree of safety. There are no restrictions on design except for those dimensional requirements imposed for reasons of safety.

This Standard is not intended to obstruct but rather to encourage the development of improved products, methods and materials. The BHMA recognizes that errors will be found, items will become obsolete, and new products, methods and materials will be developed. With this in mind, the Association plans to update, correct and revise these Standards on a regular basis. It shall also be the responsibility of manufacturers to request such appropriate revisions.

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1. SCOPE

1.1 Requirements in this standard apply to power operated revolving type doors which rotate automatically when approached by pedestrians, some small vehicular use, and manual revolving type doors for pedestrians. Included are provisions to reduce the chance of user injury and entrapment.

1.2 Where this standard contains specifications relating to maximum and minimum dimensions of various components of revolving doors for pedestrian use and some small vehicular traffic, such dimensions are included to provide user protection for what are in the industry, standard application conditions. This standard does not attempt to assess any factors that exist with respect to custom installations.

1.3 Enclosure sizes shown in the charts are considered by the industry to be standard and practical to meet the majority of the market needs and are shown as a guide to installers, service providers, owners and architects. Deviation from enclosure sizes shown does not constitute non-compliance if the door complies with all requirements in the standard.

1.4 Tests described in this standard are performed under laboratory conditions. Measurements shall be taken under neutral air pressure conditions. In actual usage, results vary because of installation, maintenance and environmental conditions.

2. DEFINITIONS

2.1 **Active Area** An area where sensors detect presence or motion.

2.2 **Automatic Door Operator** A power operated mechanism that is attached to a revolving door for the purpose of mechanically opening a door upon the receipt of an activating signal. (Also called a power door operator.)

2.3 **Automatic Home Positioning** Manual revolving doors with automatic home positioning are small diameter 3 or 4 wing revolving doors that utilize a Low Energy operator or mechanism to return the doors to the Home position once a person exit the door and the door stops rotating.

2.4 **Automatic Door Speed** The rate at which an automatic revolving door rotates measured in revolutions per minute (RPM). Three classifications are used:

Standard Speed The maximum allowable RPM for a revolving door.

Slow Speed One half of standard speed.

Low Energy Speed Door speed resulting in a maximum of 2.5 lbf.-ft. (3.4Nm) of kinetic energy.

2.5 **Bottom Rail** The lower horizontal member of the door wing.

2.6 **Break Out** A process whereby wings and/or door panels can be pushed open manually for emergency egress.

2.7 **Canopy** The area above the wings and enclosure comprised of a ceiling (soffit), fascia, and roof (optional).

2.8 **Center Shaft** The rotating center, 12 in. (305 mm) or less in diameter, of revolving doors to which the wings are attached.

2.9 **Clearance** The minimum gap around the wing to the ceiling, enclosure, and floor, not including the weather stripping, at any point in its rotation.

2.10 **Control** A unit containing electrical components for automatic control of door operation and