

Code of practice for

Safety at powered doors for pedestrian use

Part 1. General

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee MHE/31, Automatic power operated pedestrian doors, upon which the following bodies were represented:

- Association of Builders' Hardware Manufacturers
- Automatic Door Suppliers' Association
- British Retail Consortium
- Chartered Institute of Environmental Health
- Department of Health
- Health and Safety Executive
- Institute of Architectural Ironmongers

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Foreword

This Part of BS 7036 has been prepared by Technical Committee MHE/31. Together with Parts 2 and 3 it supersedes BS 7036 : 1988 which is withdrawn.

BS 7036 has been prepared in five Parts, to provide guidance on safety, maintenance and the immediate environment applicable to the increasing number of types of power operated doors in general public use as follows.

Part 1. *General*

Part 2. *Straight and curved sliding doors and prismatic and folding doors*

Part 3. *Swing doors and balanced doors*

Part 4. *Low energy swing doors*

Part 5. *Revolving doors*

BS 7036 takes into account aspects of operating experience with, and new technology for, powered pedestrian doors. It should be noted that powered pedestrian doors are commonly referred to as automatic doors.

The committee has taken into account the work to date of CEN/TC33/WG4/TG12 in respect of the planned European product standard for powered pedestrian doors.

The purpose of this Part of BS 7036 is to provide guidance to manufacturers, suppliers, installers, specifiers, occupiers and property owners on the general recommendations for the provision, installation, safe operation and maintenance of powered door systems with a view to safeguarding traffic against the risk of accidents. It is not intended to cover the manufacture or design of powered door operating systems except where the products, components or devices have a bearing on the question of safety, nor does it cover the application of powered doors to specific installations.

Attention is drawn to the fact that many of the areas where powered door systems are installed are subject to legislative requirements including workplace legislation and food hygiene legislation. Powered door installations should conform to all applicable legislative requirements.

The initial text of this code of practice was provided by the Automatic Door Suppliers' Association and due acknowledgement is made to this organisation.

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Code of practice

1 Scope

This Part of BS 7036 provides guidance on the general safety recommendations applicable at powered pedestrian door installations and should be read in conjunction with Parts 2 to 5.

NOTE 1. Although this code of practice is not intended to include industrial type powered doors and powered turnstiles, gates and barriers, the guidance given may be helpful for such installations.

NOTE 2. Although this code of practice is intended for general use, it may not be fully applicable to some installations used only by trained traffic where instruction on the safe use of powered doors has been given. Where special security requirements conflict with safety recommendations, specialist advice should be sought.

NOTE 3. The guidance in this code of practice is without prejudice to the requirements, for means of escape in case of fire, of the Fire or Building Control Authority for the area in which the installation is proposed, and specifiers of powered pedestrian doors and owners/occupiers of premises intending to fit such doors are strongly advised to consult with the relevant Authority before preparing a specification or commencing installation.

2 References

2.1 Normative references

This Part of BS 7036 incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this Part of BS 7036 only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

2.2 Informative references

This Part of BS 7036 refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Definitions

For the purposes of this British Standard the following definitions apply.

3.1 activator

Device that provides an initiating signal to the control system.

3.2 active safety device

Device that gives a signal without physical contact between the device and traffic or obstruction.

3.3 authorized technician

Person who has been trained and authorized by the manufacturer, or approved distributor, to undertake installation and/or maintenance and repairs of powered door systems in accordance with the manufacturer's specification and the recommendations of this standard.

3.4 automatic activation

Hands free activation where door movement is initiated automatically without the user needing to perform any function except to approach the door, e.g. by using motion sensors, presence sensors and pressure sensitive mats.

3.5 balanced door

Powered door equipped with double pivoted hardware so designed as to cause a combined slide and swing action when opening and closing.

3.6 bi-parting sliding door

Powered door which has two sliding leaves opening away from each other.

3.7 break-out facility

1) of sliding doors. System whereby sliding door leaves (partial break-out) and side-screens (full break-out) can be pushed outward manually in the swing mode to allow emergency escape. Partial break-out can only be achieved if the doors are closed, or are mounted exterior to the screen, or are pivoted within the doorway opening (see Part 2, figure 7).

2) of swing doors. System whereby single action swing doors can be pushed manually in the opposite direction to normal swing to allow emergency escape (see Part 3, figure 2).

3) of revolving doors. System whereby revolving door leaves are pivoted and can be pushed open manually to allow emergency escape.

3.8 check speed

Reduced operating speed at which a powered door completes its final opening or closing motion.

3.9 clear opening

Width between meeting stiles, or a door and lock jamb, that may be used by traffic passing through the doors or door when in the fully open position.

3.10 closing cycle

Movement of a door from the fully open to the fully closed position.

3.11 control mat

Pressure sensitive mat designed to detect the presence of traffic by the pressure on the mat and to give an activation signal to the control system.

3.12 control system

System including electrical and electronic components that controls the powered door operator.

3.13 controller

Nominated person, such as a security guard or receptionist, who has an override control facility (often from a remote location) over powered door operation.

3.14 curved sliding door

Powered door with a curved leaf which travels horizontally along a curved path.

3.15 cycle

Powered operation of a door from fully closed, to fully open, to fully closed.

3.16 detection zone

Area covered by the field of a presence sensing device or a motion sensing device.

3.17 door

Construction for closing an opening, intended primarily for access, and with hinged, pivoted, revolving or sliding operation.

3.18 door closer

Device for closing a door leaf utilizing stored energy.

3.19 door leaf

Hinged, pivoted, revolving or sliding part of a door.

3.20 doorway opening

Dimensions between jambs and between finished floor level and the head rail, transom or lintel.

3.21 drum

Fixed curved enclosure of a revolving door.

3.22 finger guard

Device (usually a rubber extrusion) applied to the hinge stile of a door or to the hinge jamb adjacent to the door, to prevent injury to hands and fingers.

3.23 folding door

Powered doors with two or more door leaves hinged together with one door leaf side hung to a door frame.

3.24 hold-open beam

Photoelectric device installed across a doorway opening (usually between mullions) which, if interrupted, prevents the door from closing, or re-opens the door during the closing cycle.

3.25 hold-open time

Adjustable facility which varies the time that a door remains in the open position before closing.

3.26 jamb

Vertical side member in an opening or frame.

3.27 leading mullion

Fixed vertical member in the drum of a revolving door that can form a trap as the door rotates (see Part 5 figure 3).

3.28 leading stile

Framed vertical edge member of a single door leaf adjacent to the locking jamb.

3.29 low energy swing door

Power operated door the kinetic energy of which does not exceed 1.6 J at any point in its travel.

3.30 manual activation

Initiation of door movement by the user performing a physical action, e.g. pushing the door (often called push-and-go), using a push-button, a pull-cord, an elbow switch, a key switch and access control devices.

3.31 mat well

Recessed section of floor to contain a control or safety mat.

3.32 meeting stile

Framed vertical edge member of a door leaf that abuts another in a pair of door leaves.

3.33 mid rail

Rail set between the top rail and bottom rail, not necessarily centrally.

3.34 monitoring system

System (circuit) that monitors and verifies the correct function of another system (circuit) and, in case of malfunction of the monitored system, selects a predetermined safe mode.

3.35 motion sensing device

Device designed to detect the movement of traffic and give a signal to initiate door movement.

3.36 one-way door

Powered door intended for traffic in one direction only.

3.37 opening cycle

Movement of a door from a fully closed to a fully opened position.

3.38 outer stile

Framed vertical edge member of a door leaf, in a pair, which is adjacent to the mullion or jamb.

3.39 passive safety device

Device that gives a signal following physical contact between the device and traffic or obstruction.

3.40 powered door operator

Primary drive element used to open and/or close door leaves under power. Includes the motor, gearing, brake and control system.