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Automatiske døre – Sikkerhed ved brug – Krav og prøvningsmetoder

Power operated pedestrian doorsets – Safety in use – Requirements and test methods

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DS projekt: M345333
ICS: 91.060.50

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Denne publikations overensstemmelse er:
IDT med: EN 16005:2023

DS-publikationen er på engelsk.

Denne publikation erstatter: DS/EN 16005:2012, DS/EN 16005:2012/AC:2015

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EUROPEAN STANDARD EN 16005

NORME EUROPÉENNE

EUROPÄISCHE NORM December 2023

ICS 91.060.50 Supersedes EN 16005:2012

English Version

Power operated pedestrian doorsets - Safety in use - Requirements and test methods

Blocs-portes motorisés pour piétons - Sécurité d'utilisation - Exigences et méthodes d'essai

Kraftbetätigte Türen - Nutzungssicherheit - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 20 November 2023.

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Ref. No. EN 16005:2012: E

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European foreword

This document (EN 16005:2023) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hardware and curtain walling”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2023, and conflicting national standards shall be withdrawn at the latest by June 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 16005:2012.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Compared with EN 16005:2012, the following changes have been made:

— scope revised;

— normative references updated;

— Clause 4 added; following clauses renumbered accordingly;

— Clause 5 (former Clause 4) revised;

— Clause 6 (former Clause 5) revised;

— Annex C revised;

— Annex J deleted;

— Annex ZA revised;

— Bibliography revised;

— various figures updated and revised;

— editorially revised.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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Introduction

This document is a type C standard as stated in EN ISO 12100:2010.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

— machine manufacturers (small, medium and large enterprises);

— health and safety bodies (regulators, accident prevention organizations, market surveillance etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

— machine users/employers (small, medium and large enterprises);

— machine users/employees (e.g. trade unions, organizations for people with special needs);

— service providers, e.g. for maintenance (small, medium and large enterprises);

— consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the provisions of this type-C standard.

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Power operated pedestrian doorsets – Safety in use – Requirements and test methods

1 Scope

This document specifies requirements regarding design and test methods for power operated pedestrian doorsets. Examples of how the doorset constructions may be operated include: electro-mechanically, electro-hydraulically, electro-magnetically or pneumatically.

This document covers safety in use of power operated pedestrian doorsets used for normal access as well as in emergency and escape routes and as fire resistance and/or smoke control doorsets.

The type of doorsets covered include power operated pedestrian sliding, swing and revolving doorsets, including balanced doorsets and folding doorsets with a horizontally moving door leaf.

This document deals with all significant hazards, hazardous situations and events relevant to power operated doorsets when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer.

All lifetime phases of the power operated pedestrian doorsets including transportation, assembly, dismantling, disabling and scrapping are considered by this document.

This document does not apply to:

— vertically moving doors;

— doors on lifts;

— doors on vehicles;

— power operated doors or gates mainly intended for vehicular traffic or access for goods;

— doors used in industrial processes;

— partition walls;

— doors outside the reach of people (such as crane gantry fences);

— turnstiles;

— platform doors;

— traffic barriers.

This document does not cover special functions of doorsets, such as security in banks, airports, etc. or fire and/or smoke compartmentation, where conformity of the specific function with requirements of the application is the preference.

This document does not deal with any specific requirements on noise emitted from power operated pedestrian doorsets as their noise emission is not considered to be a relevant hazard.

NOTE Noise emission of power operated pedestrian doorsets is not a significant hazard for the users of these products. It is a comfort aspect.

This document is not applicable to power operated pedestrian doorsets manufactured before the date of its publication.

This document does not cover operation in environments where there is a risk of explosion.

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2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12150-1:2015+A1:2019, *Glass in building — Thermally toughened soda lime silicate safety glass — Part 1: Definition and description*

EN 12433-1:1999, *Industrial, commercial and garage doors and gates — Terminology — Part 1: Types of doors*

EN 12433-2:1999, *Industrial, commercial and garage doors and gates — Terminology — Part 2: Parts of doors*

EN 12978:2003+A1:2009, *Industrial, commercial and garage doors and gates — Safety devices for power operated doors and gates — Requirements and test methods*

EN 14351-1:2006+A2:2016, *Windows and doors — Product standard, performance characteristics — Part 1: Windows and external pedestrian doorsets*

EN 60335-2-103:2015, *Household and similar electrical appliances — Safety — Part 2-103: Particular requirements for drives for gates, doors and windows*

EN 60529:1991,[1)] *Degrees of protection provided by enclosures (IP Code) (IEC 60529:1989)*

EN IEC 60664-1:2020,[2)] *Insulation coordination for equipment within low-voltage supply systems — Part 1: Principles, requirements and tests (IEC 60664-1:2020)*

EN ISO 4413:2010, *Hydraulic fluid power — General rules and safety requirements for systems and their components (ISO 4413:2010)*

EN ISO 4414:2010, *Pneumatic fluid power — General rules and safety requirements for systems and their components (ISO 4414:2010)*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

EN ISO 13849-1:2015, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2015)*

EN ISO 13850:2015, *Safety of machinery — Emergency stop function — Principles for design (ISO 13850:2015)*

EN ISO 13854:2019, *Safety of machinery — Minimum gaps to avoid crushing of parts of the human body (ISO 13854:2017)*

EN ISO 13856-2:2013, *Safety of machinery — Pressure-sensitive protective devices — Part 2: General principles for the design and testing of pressure-sensitive edges and pressure-sensitive bars (ISO 13856-2:2013)*

1) As impacted by EN 60529:1991/A1:2000, EN 60529:1991/A2:2013, EN 60529:1991/A2:2013/AC:2019-02 and EN 60529:1991/AC:2016-12.

2) As impacted by EN IEC 60664-1:2020/AC:2020-12.