

## **Industrial, commercial and garage doors and gates - Safety in use of power operated doors - Requirements**

Industrial, commercial and garage doors and gates -  
Safety in use of power operated doors -  
Requirements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12453:2001 sisaldab Euroopa standardi EN 12453:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 04.04.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12453:2001 consists of the English text of the European standard EN 12453:2000.</p> <p>This document is endorsed on 04.04.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This standard specifies the performance requirements in regard of the safety in use for any type of power operated doors, gates and barriers intended for installation in areas in the reach of persons, and for which the main intended uses are giving safe access for goods and vehicles accompanied or driven by persons in industrial, commercial or residential premises.</p>	<p><b>Scope:</b></p> <p>This standard specifies the performance requirements in regard of the safety in use for any type of power operated doors, gates and barriers intended for installation in areas in the reach of persons, and for which the main intended uses are giving safe access for goods and vehicles accompanied or driven by persons in industrial, commercial or residential premises.</p>
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**Võtmesõnad:** classifications, danger, definitions, force, gates, hazards, hinged shutter doors, measurement, power operation, power-operated, protective measures, roll-up doors, safety, safety of use, safety requirements, sliding gates, specification (approval), specifications

ICS 91.060.50

**English version**

**Industrial, commercial and garage doors and gates**

**Safety in use of power operated doors – Requirements**

Portes équipant les locaux industriels  
et commerciaux et de garage –  
Sécurité à l'utilisation des portes  
motorisées – Prescriptions

Tore – Nutzungssicherheit kraft-  
betätigter Tore – Anforderungen

This European Standard was approved by CEN on 2000-10-27.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Central Secretariat: rue de Stassart 36, B-1050 Brussels**

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## Foreword

This European Standard 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 May 2001, and conflicting national standards shall be withdrawn at the latest by May 2001.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This standard is part of a series of European Standards for industrial, commercial and garage doors and gates that are identified in prEN 13241:1998.

No existing European Standard is superseded.

This standard covers the requirements for power operated doors, based on hazardous situations which can be encountered when a door is used normally and also hazardous situations likely to occur because of foreseeable misuse.

The requirements specified in this standard are in the form of safety objectives. Where a technical means or solution is described, this should not be considered to be the only method of meeting the requirement, but simply an example.

Annex A is normative. Annex B is informative.

## 1 Scope

### 1.1 General

This standard specifies the performance requirements in regard of the safety in use for any type of power operated doors, gates and barriers intended for installation in areas in the reach of persons, and for which the main intended uses are giving safe access for goods and vehicles accompanied or driven by persons in industrial, commercial or residential premises.

### 1.2 Exclusions

It does not apply to

- lock gates and dock gates;
- doors on lifts;
- doors on vehicles;
- armoured doors;
- doors mainly for the retention of animals;
- theatre textile curtains;
- horizontally moving doors < 2,5 m wide and 6,25 m<sup>2</sup> area, designed principally for pedestrian use;
- revolving doors of any size;
- doors outside the reach of people (such as crane gantry fences);
- railway barriers;
- barriers used solely for vehicles.

### 1.3 Specific applications

Doors, gates and barriers can be of sliding, sidefolding, tilting, pivoting, rolling, vertical lifting and other types with many variances for each type. If not specified otherwise, the word "door" refers to any of these types and variances of doors, gates and barriers.

In the following, a power-operated door is considered as a whole. Nevertheless such a door can be the result of the implementation of a drive unit onto a manual door. In that case, this standard is applicable for the completed final installation.

Requirements for specific characteristics (such as fire resistance, blast-resistance, acoustic, escape route function, burglar resistance or thermal insulation, etc.) which certain doors are required to comply with, are not specified in this standard. If the specifications of a standard on the special characteristics of such doors are in conflict with the requirements of this standard, that standard has preference.

## 2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 418, *Safety of machinery – Emergency stop equipment, functional aspects – Principles for design.*

EN 954-1, *Safety of Machinery – Safety related parts of control systems – Part 1: General principle for design.*

EN 982, *Safety of machinery – Safety requirements for fluid power systems and their components – Hydraulics.*

EN 983, *Safety of machinery – Safety requirements for fluid power systems and their components – Pneumatics.*

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

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

EN 12445, *Industrial, commercial and garage doors and gates – Safety in use of power operated doors – Test methods.*

EN 12604, *Industrial, Commercial and garage doors and gates – Mechanical aspects – Requirements.*

prEN 12635:1996, *Industrial, Commercial and garage doors and gates – Procedures for the safe installation and use.*

prEN 12978:2000, *Industrial, commercial and garage doors and gates – Safety devices for power operated doors and gates – Requirements and test methods.*

prEN 13241:1998, *Industrial, commercial and garage doors and gates – Product standard.*

EN 50081-1, *Electromagnetic compatibility – Generic emission standard – Part 1: Residential, commercial and light industry.*

EN 50081-2, *Electromagnetic compatibility – Generic emission standard – Part 2: Industrial environment.*

EN 50082-1, *Electromagnetic compatibility – Generic immunity standard – Part 1: Residential, commercial and light industry.*

EN 50082-2, *Electromagnetic compatibility – Generic immunity standard – Part 2: Industrial environment.*

EN 55014-1, *Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission – Product family standard (CISPR 14-1:1993).*

EN 55014-2, *Electromagnetic compatibility – Requirements for household appliances, electronic tools and similar apparatus – Part 2: Immunity - Product family standard (CISPR 14-2:1997).*

EN 60068-2-52, *Environmental testing – Part 2: Tests - Test Kb: Salt mist, cyclic (sodium chloride solution) (IEC 60068-2-52:1996).*

EN 60204-1:1997, *Safety of Machinery – Electrical equipment of machines – Part 1: General requirements (IEC 60204-1:1997).*

EN 60335-1:1994, *Safety of household and similar electrical appliances – Part 1: General requirements (IEC 335-1:1991, modified).*

prEN 60335-2-95:1999, *Safety of household and similar electrical appliances – Part 2-95: Particular requirements for drives for vertically moving garage doors for residential use (IEC 60335-2-95:1998, modified).*

EN 60529, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989).*

IEC 60245-4, *Rubber insulated cables – Rated voltage up to and including 450/750V – Part 4: Cords and flexible cables.*

### 3 Terms and definitions

For the purpose of this standard, the terms and definitions EN 12433-1, EN 12433-2 and prEN 12978:2000 apply, together with the following:

#### 3.1

##### **inherent protective equipment**

protective equipment integrated into the drive system which is actuated by the variations of the input and/or the output characteristics of the drive itself, in order to provide protection against hazards

#### 3.2

##### **domestic garage door**

door used on a domestic garage which is provided for one single household only and where the door does not protrude into a public area

### 4 Hazards, hazardous situations, hazardous events

#### 4.1 General

As the main function of a door is to open up or close off an opening, the actual movement of the door can produce hazardous situations for persons, goods and vehicles in the vicinity which by nature cannot all be avoided by design.

The possible hazards are dependant on the condition of the door and the way the door is used.

When door and equipment are in working order and either used correctly (i.e. as specified by the manufacturer in the instruction manual) or misused in a foreseeable manner, the hazards which can be generated by a power operated door are as follows:

##### **4.1.1 Hazards caused by crushing, shearing and drawing-in points**

A hazardous point is considered to exist up to a height of 2,5 m above the floor or any other permanent access level, and when it occurs: