Industrial, commercial and garage doors and gates - Restance to wind load - Testing and calculation

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EESTI STANDARDI EESSÕNA

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NATIONAL FOREWORD

Käsitlusala: This standard specifies the test method and/or calculation of resistance to wind load for doors in a closed position.	**Scope:** This standard specifies the test method and/or calculation of resistance to wind load for doors in a closed position.

ICS 91.060.50

Võtmesõnad: construction, design, erecting (construction operation), examination, examination (quality assurance), gates, mathematical calculations, resistors, specification (approval), specifications, test specimens, testing, wind loading, winds

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English version

Industrial, commercial and garage doors and gates

Resistance to wind load – Testing and calculation

Portes équipant les locaux industriels, commerciaux et de garage – Résistance à la charge de vent – Essais et calculs

Tore – Widerstand gegen Windlast – Prüfung und Berechnung

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

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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.

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CEN

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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of an identical text or by endorsement, at the latest by May 2001, and conflicting national standards shall be withdrawn at the latest by May 2001.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 one of a series of performance standards identified within the product standard prEN 13 421:1999.

This European Standard as well as relevant national regulations and standards will enable the actual exposure levels to be determined for the individual locations of the products.

Annexes A and B are informative.

Introduction

The objective of strength tests and calculations according to this standard is to assess that the strength of the door assembly is sufficient to fulfil the essential requirements in the directives, to ensure that the products remain safe independent of their conditions. Tests and / or calculations may be performed by the manufacturer and / or approved laboratory.

1 Scope

1.1 General

This European Standard specifies the test method and / or calculation of resistance to wind load for doors in a closed position.

The doors are intended for installation in areas in the reach of people, for which the main intended uses are giving safe access for goods, vehicles and persons in industrial, commercial or residential premises.

The doors may be manually or power operated.

This document applies to all doors provided in accordance with prEN 13241:1998.

1.2 Exclusions

It does not apply to:
- lock gates and dock gates;
- doors on lifts;
- doors on vehicles;
- armoured doors;
- door mainly for the retention of animals;
- theatre textile curtains;
- horizontally moving doors less than 2,5 m wide and 6,25 m^2 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.

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 12424:2000	Industrial, commercial and garage doors and gates - Resistance to wind load – Classification
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 12604	Industrial, commercial and garage doors and gates - Mechanical aspects – Requirements
prEN 13241:1998	Industrial, commercial and garage doors and gates - Product standard
EN ISO 7345	Thermal insulation – Physical quantities and definitions (ISO 7345:1987)

3 Terms and definitions

For the purpose of this standard the terms and definitions in EN 12433-1 and EN 12433-2 as well as EN ISO 7345 shall apply.

4 Principle of test

The principle of test is to apply a pressure differential across the test specimen, to determine failure.
Full size specimen shall be tested. If it is impossible or uneconomical to achieve full scale testing, parts of door assemblies (elements E) shall be tested for calculating a result for a full door calculation.

Whether testing full door assemblies or elements of doors the maximum height/width dimension which is critical to the wind load resistance (e. g. width for vertically operating doors) shall be tested for each design criteria.

In order to provide information for the extrapolation of results for smaller sizes, at least one additional test shall be completed on an alternative dimension for each design criterium.