# Brány a vráta Mechanické vlastnosti Požiadavky a skúšobné metódy STN EN 12604+A1

Industrial, commercial and garage doors and gates - Mechanical aspects - Requirements and test methods

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 05/21

Obsahuje: EN 12604:2017+A1:2020

Oznámením tejto normy sa ruší STN EN 12604 (74 6470) z apríla 2018

### EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

#### EN 12604:2017+A1

December 2020

ICS 91.060.50

Supersedes EN 12604:2017

#### **English Version**

## Industrial, commercial and garage doors and gates - Mechanical aspects - Requirements and test methods

Portes et portails industriels, commerciaux et résidentiels - Aspects mécaniques - Exigences et méthodes d'essai Tore - Mechanische Aspekte - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 14 August 2017 and includes Amendment 1 approved by CEN on 9 November 2020.

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 CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents		Page
Europ	oean foreword	4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	7
4	Safety requirements and/or protective measures	7
4.1	General	
4.2	Design and construction	
4.2.1	Operability	
4.2.2	Glazing	7
4.3	Protection against unintentional and uncontrolled movements	7
4.3.1	Guides and end stops	7
4.3.2	Unintentional movements due to wind	8
4.3.3	Uncontrolled movements of vertically operating doorsdoors	8
4.3.4	Safeguarding against dropping of vertically operating door leaves	8
4.3.5	Safeguarding against dropping of hinged doors	
4.4	Forces for manual operation	
4.5	Devices for manual operation	
4.6	Finger protection	
4.7	Specific requirements for parts used in suspension and balancing systems	
4.7.1	General	
4.7.2	Springs	
4.7.3	Counterweights	
4.7.4	Steel wire ropes, chains, straps	
4.8	Pass doors	11
4.9	Additional requirements for doors operating by gravity or other self-closing mechanism	11
_		
5 5.1	Verification of the safety requirements and/or protective measures	
5.1 5.2	Design and construction	
5.2.1	Operability	
5.2.2	Glazing	
5.3	Protection against unintentional and uncontrolled movements	
5.3.1	Guides and end stops	
5.3.2	Unintentional movements due to wind	12
5.3.3	Uncontrolled movements of vertically operating doors	
5.3.4	Safeguarding against dropping of vertically operating door leaves	
5.3.5	Safeguarding against dropping of hinged doors	
5.4	Forces for manual operation	
5.5	Devices for manual operation	
5.6	Finger protection	
5.7	Specific requirements for parts used in suspension and balancing systems	
5.7.1	Springs	
5.7.2	Counterweights	
	-	

#### EN 12604:2017+A1:2020 (E)

5.8 Pass doors	5.7.3	Steel wire ropes, chains, straps	. 14
5.9 Warning signs and/or devices	5.8	Pass doors	. 14
7 Annex A (informative) Guidelines for a safe construction	5.9		
Annex A (informative) Guidelines for a safe construction	6	At Information for Use	. 14
Annex B (informative) Examples of mechanical protection and safety distances18	7	A) Marking	.16
	Annex	A (informative) Guidelines for a safe construction	.17
Annex C (informative) Logbook19	Annex	B (informative) Examples of mechanical protection and safety distances	.18
	Annex	C (informative) Logbook	.19

#### **European foreword**

This document (EN 12604:2017+A1:2020) 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 2021 and conflicting national standards shall be withdrawn at the latest by June 2021.

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 includes Amendment 1 approved by CEN on 9 November 2020.

This document supersedes A EN 12604:2017 A.

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A].

Compared with EN 12604:2000 and EN 12605:2000, the following changes have been made:

- a) EN 12604 has been merged with EN 12605; as EN 12605:2000 will be withdrawn;
- b) limitation of the scope to manually operated doors;
- c) cancellation of relationships to Regulation (EU) N°305/2011 and Machinery Directive 2006/42/EC (Annex ZA and ZB deleted);
- d) revision of document structure (Clause 4 and Clause 5);
- e) sorting and summary of requirements (Clause 4);
- f) revision of informative Annexes in accordance to Clause 4 of this standard;
- g) editorial revision.

This document is one of a series of supporting standards for industrial, commercial and garage doors and gates, which are identified in EN 13241.

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, Turkey and the United Kingdom.

EN 12604:2017+A1:2020 (E)

#### Introduction

This document has been prepared to meet the needs of manufacturers and users, with the primary purpose of providing design and performance for mechanical aspects of industrial, commercial and garage doors and gates used by vehicles accompanied or driven by persons.

With the aim of clarifying the intention of this document and avoiding doubts when reading it, it was assumed that clarification occurred between all involved parties (manufacturer, professional installer, user, etc.) concerning:

- components to be maintained and kept in good working order;
- the intended use, the type of users and the place of use of the door;
- all parts of door installations, whether fixed or moving, including the fixing and assembling means, to be in all respects of good construction, suitable material, adequate strength and free from obvious defects for their intended working life;
- the design to be in accordance with European technical rules taking into account the most unfavourable forces occurring during the operation and all failure modes.

#### 1 Scope

This European Standard specifies mechanical requirements and test methods for manually operated doors, gates and barriers, intended for installation in areas in the reach of persons, and for which the main intended use is giving safe access for goods and vehicles accompanied or driven by persons in industrial, commercial or residential premises.

This European Standard also covers manually operated vertically moving commercial doors such as rolling shutters and rolling grilles, used in retail premises which are mainly provided for goods protection.

This document applies only to doors which are not part of the load carrying structure of the building. It does not apply to:

- lock gates and dock gates;
- doors on vehicles:
- doors mainly for the retention of animals unless they are at the site perimeter;
- doors intended for pedestrian use;
- railway barriers.

Whenever the term "door" is used in this document, it is deemed to cover the full scope of types and variances of doors, gates and barriers defined by the scope of this European Standard.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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 12385-4, Steel wire ropes — Safety — Part 4: Stranded ropes for general lifting applications

EN 12600:2002, Glass in building — Pendulum test — Impact test method and classification for flat glass

EN 13241, Industrial, commercial, garage doors and gates — Product standard, performance characteristics

EN 13411-2, Terminations for steel wire ropes — Safety — Part 2: Splicing of eyes for wire ropes slings

EN 13411-3, Terminations for steel wire ropes — Safety — Part 3: Ferule secured eyes

EN 13411-6, Terminations for steel wire ropes — Safety — Part 6: Asymmetric wedge socket clevis

EN 61032:1998, Protection of persons and equipment by enclosures — Probes for verification (IEC 61032:1997)

#### koniec náhľadu – text ďalej pokračuje v platenej verzii STN