

BS EN 12217:2015



BSI Standards Publication

# Doors — Operating forces — Requirements and classification

**bsi.**

...making excellence a habit.™

**National foreword**

This British Standard is the UK implementation of EN 12217:2015. It supersedes BS EN 12217:2003 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/538, Doors, windows, shutters, hardware and curtain walling.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2015. Published by BSI Standards Limited 2015

ISBN 978 0 580 87437 6

ICS 91.060.50

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2015.

**Amendments issued since publication**

Date	Text affected
------	---------------

---

EUROPEAN STANDARD

**EN 12217**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2015

ICS 91.060.50

Supersedes EN 12217:2003

English Version

**Doors - Operating forces - Requirements and classification**Portes - Forces de manoeuvre - Prescriptions et  
classificationTüren - Bedienungskräfte - Anforderungen und  
Klassifizierung

This European Standard was approved by CEN on 12 March 2015.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, 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: Avenue Marnix 17, B-1000 Brussels**

<b>Contents</b>		Page
<b>Foreword</b> .....		<b>3</b>
<b>1</b>	<b>Scope</b> .....	<b>4</b>
<b>2</b>	<b>Normative references</b> .....	<b>4</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>4</b>
<b>4</b>	<b>Classification</b> .....	<b>4</b>
<b>5</b>	<b>Use of historical data</b> .....	<b>5</b>
<b>Bibliography</b> .....		<b>6</b>

## Foreword

This document (EN 12217:2015) 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 October 2015, and conflicting national standards shall be withdrawn at the latest by October 2015.

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

This document supersedes EN 12217:2003.

Compared with EN 12217:2003, the following changes have been made:

- a) Terms and definitions have been revised;
- b) clarification on how the final total classification is obtained from different results;
- c) one new class 5 has been added in Table 1;
- d) a new Clause 5 “use of historical data” has been added.

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

## 1 Scope

This European Standard is applicable to hinged/pivoted and sliding doorsets with latches, for pedestrian use. It defines the classification of the test results for the forces and/or torques to open/close doors and to engage/release and lock/unlock the building hardware using a key or handle, after testing in accordance with EN 12046-2.

It is only applicable to the manual operation of doorsets.

The classification of forces for doorsets with self-closing devices engaged is excluded from this test method. It is also not applicable to doorsets with special hardware, e.g. emergency exit devices.

The tests are applicable to doorsets of any material.

The operation of some glazed doors (door high windows) involves hardware with latches and may be classified in accordance with 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 12046-2:2000, *Operating forces — Test method — Part 2: Doors*

EN 12519, *Windows and pedestrian doors — Terminology*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12519 and the following apply.

### 3.1

#### **doorset**

complete unit consisting of the door frame and the door leaf or leaves supplied, with the essential building hardware and seals

### 3.2

#### **hand operated building hardware**

building hardware operated by means of a hook grip made with the fingers in an active role and the thumb in a passive role; the proximal and distal interphalangeal joints are flexed around the handle

Note 1 to entry: See EN 1005-1:2001+A1:2008, 3.7.2.

### 3.3

#### **finger operated hardware**

hardware operated by means of a grip made with the thumb and the forefinger

Note 1 to entry: See EN 1005-1:2001+A1:2008, 3.7.1.

## 4 Classification

When tested in accordance with EN 12046-2, a doorset shall be classified in accordance with Table 1. The final total class of operating forces/torques of doors results from lowest class obtained among the particular tested forces or torques.

**Table 1 — Classification of operating forces and torques**

<b>Resistance to:</b>	<b>Class 0</b>	<b>Class 1</b>	<b>Class 2</b>	<b>Class 3</b>	<b>Class 4</b>	<b>Class 5</b>
Closing force or force to commence motion, maximum value (N)	— <sup>a</sup>	75	50	25	10	50
Hand operated building hardware <sup>b</sup>						
— Maximum torque (Nm)	—	10	5	2,5	1	5
— Maximum force (N)	—	100	50	25	10	50
Finger operated building hardware <sup>b</sup>						
— Maximum torque (Nm)	—	5	2,5	1,5	1	1,5
— Maximum force (N)	—	20	10	6	4	6
<sup>a</sup> No requirements.						
<sup>b</sup> The higher measured value of force or torque according to EN 12046-2 determines the class.						

NOTE For the higher operating forces in Classes 1 and 2, the suitability of the hardware (e.g. keys, locks, lock cylinder, handles) needs to be ensured.

## 5 Use of historical data

Results of already performed tests according to EN 12046-2:2000 may be used for classification.

Classifications according to EN 12217:2003 resulting in Classes 0 to 4 need not be reclassified according to this European Standard.

## Bibliography

- [1] EN 1005-1:2001+A1:2008, *Safety of machinery — Human physical performance — Part 1: Terms and definitions*



# British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

## About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

## Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at [bsigroup.com/standards](http://bsigroup.com/standards) or contacting our Customer Services team or Knowledge Centre.

## Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at [bsigroup.com/shop](http://bsigroup.com/shop), where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

## Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to [bsigroup.com/subscriptions](http://bsigroup.com/subscriptions).

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

**PLUS** is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit [bsigroup.com/shop](http://bsigroup.com/shop).

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email [bsmusales@bsigroup.com](mailto:bsmusales@bsigroup.com).

## BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

## Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

## Copyright

All the data, software and documentation set out in all British Standards and other BSI publications are the property of and copyrighted by BSI, or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI. Details and advice can be obtained from the Copyright & Licensing Department.

## Useful Contacts:

### Customer Services

**Tel:** +44 845 086 9001

**Email (orders):** [orders@bsigroup.com](mailto:orders@bsigroup.com)

**Email (enquiries):** [cservices@bsigroup.com](mailto:cservices@bsigroup.com)

### Subscriptions

**Tel:** +44 845 086 9001

**Email:** [subscriptions@bsigroup.com](mailto:subscriptions@bsigroup.com)

### Knowledge Centre

**Tel:** +44 20 8996 7004

**Email:** [knowledgecentre@bsigroup.com](mailto:knowledgecentre@bsigroup.com)

### Copyright & Licensing

**Tel:** +44 20 8996 7070

**Email:** [copyright@bsigroup.com](mailto:copyright@bsigroup.com)