BS EN 948:1999

Hinged or pivoted doors — Determination of the resistance to static torsion

The European Standard EN 948:1999 has the status of a British Standard

ICS 91.060.50

National foreword

This British Standard is the English language version of EN 948:1999.

The UK participation in its preparation was entrusted by Technical Committee B/538, Doors, windows, shutters, hardware and curtain walling, to Subcommittee B/538/2, Doors, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

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

This British Standard forms part of a package of standards on doors which will not become fully effective until all standards in the package have been published and any superseded standards have been withdrawn. The date of withdrawal for national standards will be agreed within CEN and will be notified.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled "International Standards Correspondence Index", or by using the "Find" facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 4, an inside back cover and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

This British Standard, having been prepared under the direction of the Sector Committee for Building and Civil Engineering, was published under the authority of the Standards Committee and comes into effect on 15 December 1999

ISBN 0 580 35907 7

Amendments issued since publication

Amd. No.	Date	Comments

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 948

August 1999

ICS 91.060.50

Supersedes EN 129:1984

English version

Hinged or pivoted doors — Determination of the resistance to static torsion

Portes battantes ou pivotantes — Détermination de la résistance à la torsion statique

Drehflügeltüren — Ermittlung der Widerstandsfähigkeit gegen statische Verwindung

This European Standard was approved by CEN on 21 July 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipuiate 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.

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 Central Secretariat has the same status as the official versions.

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

CEN

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

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

Ref. No. EN 948:1999 E

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 33, Doors, windows, shutters and building hardware, the Secretariat of which is held by AFNOR.

This European Standard supersedes EN 129:1984.

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 February 2000, and conflicting national standards shall be withdrawn at the latest by February 2000.

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 standards for doors.

This standard has been prepared taking into account ISO 9381 and EN 129 and supersedes EN 129.

Introduction

For manufacturers of door leaves whose products are not sold as part of a doorset, provision is made for claiming compliance with the relevant requirements by the testing of such door leaves in a typical frame. Nevertheless, the fact that a particular door leaf meets with the relevant requirements in this way does not necessarily mean that a door assembly incorporating that door leaf will meet the requirements.

1 Scope

This European Standard applies to all vertically hinged or pivoted doors.

The standard specifies the method to be used to determine the permanent deformation caused when static stress in torsion is applied to an open door leaf fixed in its own door frame as part of a doorset.

NOTE Such torsional stresses that might reasonably be expected, such as in attempts to free a door which sticks, should neither damage nor impair the performance of a door.

The method may also be used in respect of a door leaf submitted for test in a frame which the manufacturer considers appropriate to and typical for the intended utilization.

2 Apparatus

2.1 Test surround

The surround in which the test specimen is tested, which shall be sufficiently rigid to withstand the test load without deflecting to an extent likely to influence the test result.

2.2 Loading equipment

A suitable device, with weights or a controlled and calibrated ram, accurate to 2 %.

2.3 Measuring equipment

A dial or digital gauge, accurate to 0,01 mm.

3 Test specimens

Test specimens shall be stored and tested in a non-destructive environment within the ranges of 15 °C to 30 °C and 25 % to 75 % relative humidity.

Doors which are designed to be glazed, shall be supplied for testing with all glazing carried out in accordance with the door manufacturer's specification.

4 Procedure

Without any vertical restraint, position the door leaf at an angle of $(90 \pm 5)°$ to the plane of the frame, and fix the top lockside corner at a point (50 ± 5) mm from each edge of the door leaf.

To take up any slack in the hinges, carefully apply a preload of (200 ± 4) N, horizontally and normal to the plane of the leaf at the lower lockside corner, at a point (50 ± 5) mm from each edge of the door leaf. Maintain this load for (60 ± 5) s. Remove the load and after (60 ± 5) s measure, to the nearest 0,1 mm, the location of the lower corner of the door leaf at the loading position (see Figure 1).

To the same loading point apply a static load F and maintain for (300 ± 5) s. Measure the maximum deformation under load to the nearest 0,1 mm. Remove the load and after (180 ± 5) s repeat the measurement at the lower corner of the door leaf.

All loads shall be carefully applied and removed in maximum 100 N, accurate to 2 % increments and over a minimum of 1 s for each increment, or the equivalent rate if continuous, in order to avoid dynamic effects.

5 Expression of results

Record:

— the deformation under load F and the residual deformation of the door leaf as expressed by the difference in the measurements at the lower corner of the door leaf before the application of load F and (180 ± 5) s after the removal of this load.

6 Test report

The test report shall contain the following information:

a) reference to this European Standard;

b) all necessary details to identify the doorset or door leaf;

c) all relevant details concerning the type, specified dimensions, materials, form and construction of the doorset or door leaf, including the position of hardware;

d) full details of the frame and hardware supplied if the assembly is not a doorset;

e) laboratory storage and testing conditions;

f) the load F, in newtons, applied in the test;

g) the results expressed as in clause **5**;

h) details of any damage that appeared during the test;

i) name of testing laboratory;

j) date of test.

Dimensions in millimetres

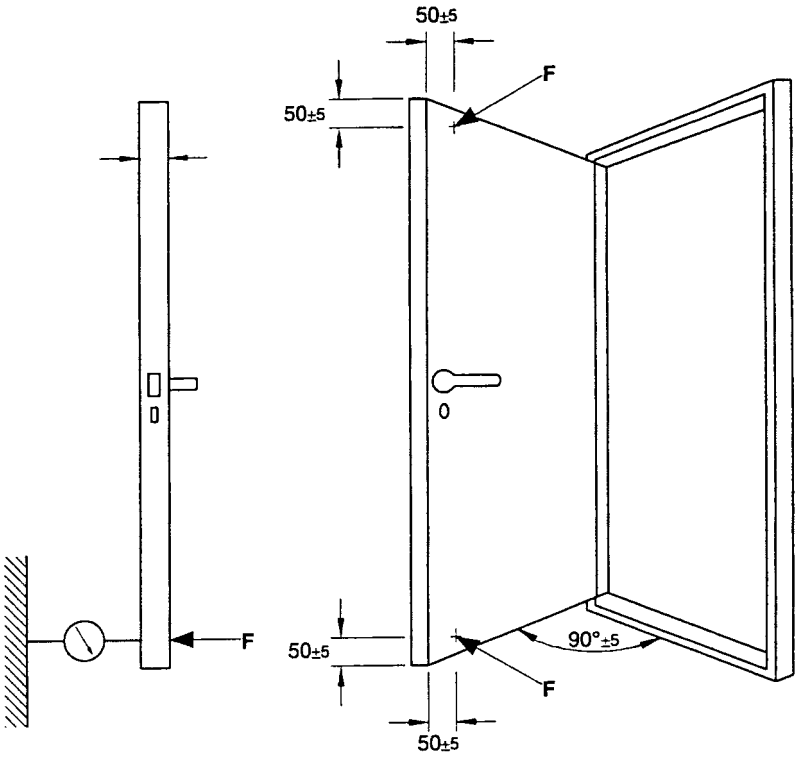

Figure 1

blank

BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover. Tel: 020 8996 9000. Fax: 020 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: 020 8996 9001. Fax: 020 8996 7001.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre. Tel: 020 8996 7111. Fax: 020 8996 7048.

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration. Tel: 020 8996 7002. Fax: 020 8996 7001.

Copyright

BSI
389 Chiswick High Road
London
W4 4AL