



BSI Standards Publication

Strength and stability of furniture

Part 5: Requirements for strength,
durability and stability of tables and
trolleys for domestic use

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ISBN 978 0 580 64433 7

ICS 97.140

The following BSI references relate to the work on this standard:

Committee reference FW/0/2

Draft for comment 08/30189241 DC

Publication history

First published as BS 4875-5, September 1985

Second edition November 2001

Third (present) edition April 2009

Amendments issued since publication

Date	Text affected
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Summary of pages

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Foreword

Publishing information

This part of BS 4875 is published by BSI and came into effect on 30 April 2009. It was prepared by Subcommittee FW/0/2, *Domestic and contract furniture*, under the authority of Technical Committee FW/0, *Furniture*. A list of organizations represented on these committees can be obtained on request to their secretary.

Supersession

Together with BS EN 15372:2008, this part of BS 4875 supersedes BS 4875-5:2001, which is withdrawn.

Information about this document

This new edition of BS 4875-5 incorporates changes made necessary by the publication of BS EN 15372. It does not represent a full review or revision of the standard, which will be undertaken in due course. BS EN 15372 specifies strength, stability and durability requirements for non-domestic tables. Therefore, this new edition of BS 4875-5 has been prepared to cover domestic tables and trolleys only.

The performance requirements are verified by tests that reproduce normal use and common types of misuse to which tables and trolleys can be subjected. The tests are designed to be applied to an article that is fully assembled and ready for use. Five test levels are given corresponding to the variations in severity of end-use to be expected for various types of tables and trolleys, e.g. delicate styles, short-life furniture, robust serviceable styles. While the tests reproduce normal use and common types of misuse, they do not reproduce any abuse to which the article may be subjected.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

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

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

1 Scope

This part of BS 4875 specifies performance requirements for the strength, durability and stability of the structure of tables and trolleys for domestic use. It does not apply to non-domestic tables, tables intended for educational institutions or office desks. It also does not apply to kitchen furniture, which is covered by BS EN 14749:2005.

NOTE 1 The requirements of this standard are intended to demonstrate the ability of the item to give satisfactory service in its intended environment. Conformity to the standard does not ensure that structural failure will not eventually occur as a result of habitual misuse or after an excessively long period of service.

NOTE 2 Test methods from BS EN 1730 are specified where appropriate.

NOTE 3 The specified tests can be carried out on glass topped tables or trolleys, but the tests do not guard against accidental damage and attention is drawn to the additional requirements for tables and trolleys containing glass which are contained in BS 7376.

NOTE 4 If a table or trolley incorporates storage facilities, reference should also be made to BS 4875-7 and BS EN 14749.

2 Normative references

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

BS EN 1730:2000, *Domestic furniture – Tables – Test methods for determination of strength, durability and stability*

3 Principle of the performance tests

3.1 General

Conformity to the requirements given in Clause 4 for the strength, durability and stability of the structure of an article of furniture is verified by applying loads or forces simulating normal functional use, as well as acceptable misuse, according to a graded scale of severity (see Annex A).

The purpose of the tests is summarized in Table 1. A summary of the tests is given in Table 2.

The test sequence as a whole determines the following:

- a) static strength and initial damage;
- b) fatigue strength and damage propagation;
- c) ability to withstand acceptable misuse, and demonstration of sufficient residual strength.

The severity of loading is graded by varying the number of applications or the magnitude of the forces applied.

Table 1 Purpose of tests

Name of test	Primary purpose	Secondary purpose	Type of test
Stability: horizontal impact vertical force	Basic strength	Damage initiation	Functional (normal use)
Vertical static			
Horizontal static			
Horizontal fatigue Vertical fatigue Sustained load	Service durability	Damage propagation	Acceptable misuse
Vertical impact Drop	Handling/Impact strength	Residual strength	

3.2 Stability tests

Stability tests assess the ability of the table or trolley to withstand forces that tend to cause it to overturn.

3.3 Static load tests

Static load tests assess the static strength of the table or trolley, under the high levels of loading that occur only occasionally.

3.4 Fatigue tests

Fatigue tests assess the strength of the component parts of the table or trolley under the repeated operations, movement, or loads which will occur during daily use.

3.5 Impact tests

Impact tests assess the impact strength of the table or trolley under the rapid rates of loading that occur only occasionally.

4 Requirements

Each table or trolley shall be subjected to each of the tests specified in Table 2, at the same test level and in the sequence specified in Table 2. At the end of the tests, none of the following shall have occurred:

- in the stability tests (BS EN 1730:2000, 6.7, and Annex B of this standard), overturning of the table or trolley;
- any fracture of any member, joint or component;
- any loosening, shown to be permanent by hand pressure applied to relevant members, of joints intended to be rigid;
- any free movement in the top, legs or components of the table or trolley greater than that noted in the initial inspection;
- any deformation of any part that will adversely affect the function or appearance of the table or trolley;
- any clearly audible noise developed during testing;