

Educational furniture —

Part 3: Specification for strength and stability of tables for educational institutions

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Committees responsible for this British Standard

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- British Educational Equipment Association
- Clasp Development Group
- Counties Furniture Group
- Department of Education and Science
- Department of the Environment (Crown Suppliers)
- Design Council
- Furniture Industry Research Association
- Greater London Council
- Inner London Education Authority
- Kent County Council
- Local Authorities' Management Services and Computer Committee
- Mid Glamorgan County Council
- Society of Industrial Artists and Designers

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Foreword

This Part of BS 5873 has been prepared under the direction of the Furniture and Household Equipment Standards Committee.

The strength and stability requirements of this standard are based on the tests described in BS 4875-5, BS 4875-6, BS 4875-7 and BS 4875-8 and on additional research carried out by the Furniture Industry Research Association. This standard should therefore be used in conjunction with BS 4875-5, BS 4875-6, BS 4875-7 and BS 4875-8.

For tables between 630 mm and 940 mm high (see clause 1 and Table 1), two levels of strength and stability have been specified. Where the conditions of use are expected to be severe, purchasers are advised to specify the appropriate performance rating because the increased durability is likely to incur lower replacement costs.

A guide to the relationship between the tests and use in practice is given in Appendix C.

The other Parts of this standard are as follows:

- *Part 1: Specification for functional dimensions, identification and finish of chairs and tables for educational institutions;*
- *Part 2: Specification for strength and stability of chairs for educational institutions.*

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This Part of BS 5873 specifies strength and stability requirements for stacking and non-stacking tables for educational institutions. Requirements for tables containing other components, such as drawers, trays and shelves, are also included.

Two performance ratings, normal and severe, are specified for the larger sizes of tables, i.e. those between 630 mm and 940 mm high. Tables for heavy-duty craft purposes have special requirements that are not covered by this standard.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this Part of BS 5873 the following definitions apply.

2.1

acceptable misuse tests

test loadings applied to a table to simulate stresses that may be applied to it when it is used other than for its intended purpose

NOTE This category of loadings is thus intended to cater for such foreseen abuse of a table as may occur mainly during handling and transport, or for example when a table is used for one or more persons to sit or stand on for viewing purposes.

2.2

static loading

the steady and gradual application, up to the maximum that the table may be required to withstand, of a test loading repeated a sufficient number of times to make sure of the static strength of the table

2.3

fatigue loading

the reiterated application to the table in a steady and gradual manner, of the load which is likely to occur most frequently

2.4

stability

the ability to withstand overturning

3 Performance ratings

The performance ratings and test levels that are applicable to tables of different heights are given in Table 1.

Table 1 — Performance ratings and test levels

Performance rating	Table height	Test level (BS 4875-5, BS 4875-6, BS 4875-7 and BS 4875-8)
Normal	Up to 940 mm	4
Severe	Between 630 mm and 940 mm (see clause 1)	5

NOTE The specification of both test levels 4 and 5 for sizemarks 4 and 5 (see BS 5873-1) reflects the varying circumstances in which the tables may be used. Where the use of tables is not likely to be exceptionally severe, test level 4 (normal) is appropriate, but where exceptionally severe circumstances are to be expected purchasers are advised to specify test level 5 (severe) in the interests of longer life and lower replacement costs.

4 Strength

When tested at the appropriate test level (see Table 1) using the methods described in BS 4875-5, together with the modified vertical static load test (see Appendix A) and the overturning damage test (see Appendix B), tables shall comply with the following requirements.

- Any permanent deflection of the legs recorded after testing shall not exceed table height/14.
- In the sustained load test (6.2 of BS 4875-5:1985), the recorded deflection of the table top shall not exceed span/250 for particle board, span/150 for wood, or span/100 for other materials.
- In the horizontal static load test (6.3 of BS 4875-5:1985), the recorded deflection shall not exceed 1 mm for every 25 N of horizontal force applied.
- When inspected as described in clause 4 of BS 4875-5:1985, no defects shall be observed after testing.

In addition, tables that contain shelves, drawers, trays, flaps, or lockers, i.e. pivoted doors, when tested at the appropriate test level (see Table 1) using the methods described in BS 4875-7, shall comply with the following requirements.

- The recorded deflection of shelves shall not exceed span/250 for particle board, span/150 for wood, or span/100 for other materials.
- The force required to move drawers shall not exceed 70 N and to maintain movement shall not exceed 45 N.
- When inspected as described in clause 4 of BS 4875-7:1985, no defects shall be observed after testing.