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## **Furniture — Tables — Determination of stability**

*Ameublement — Tables — Détermination de la stabilité*

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Reference number  
ISO 7172 : 1988 (E)

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7172 was prepared by Technical Committee ISO/TC 136, *Furniture*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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# Furniture — Tables — Determination of stability

## 0 Introduction

This International Standard is one of a series being prepared on the strength, durability and stability of furniture. The series currently consists of the following:

ISO 7170, *Furniture — Storage units — Determination of strength and durability.*

ISO 7171, *Furniture — Storage units — Determination of stability.*

ISO 7172, *Furniture — Tables — Determination of stability.*

ISO 7173, *Furniture — Chairs and stools — Determination of strength and durability.*

ISO 7174-1, *Furniture — Chairs — Determination of stability — Part 1: Upright chairs and stools.*

ISO 7174-2, *Furniture — Chairs — Determination of stability — Part 2: Chairs with tilting or reclining mechanism.*

ISO 8019, *Furniture — Tables — Determination of strength and durability.*

## 1 Scope and field of application

This International Standard describes methods for determining the stability of all kinds of tables, except tables permanently attached to the structure of the building.

The test results are only valid for the article tested. When the test results are intended to be applied to other similar articles, the test specimen should be representative of the production model.

In the case of designs not catered for in the test procedures, the test should be carried out as far as possible as described, and a list made of the deviations from the test procedure.

## 2 Definition

**stability:** Ability to withstand forces that tend to cause the article to overturn.

## 3 Test equipment

**3.1 Vertical force application device,** which can apply a vertical force, either at a given value or a gradually increasing

value. The device shall not hinder movement of the article being tested. If a given value is wanted, the device may consist of a mass, e.g. a steel plate. The force shall have an accuracy of  $\pm 5\%$ .

**3.2 Horizontal force application device,** for example spring gauge, which can apply a gradually increasing horizontal force to a top. The force shall have an accuracy of  $\pm 5\%$ .

**3.3 Stops,** to prevent the article from sliding but not overturning, no higher than 12 mm except in cases where the design of the item necessitates the use of higher stops, in which case the lowest that will prevent the item from sliding shall be used.

**3.4 Floor surface,** horizontal, flat.

## 4 General test requirements

For tables with extension leaves, etc., carry out the test at the least stable edge position, which may be at the centre of the extension leaf edge. If more than one arrangement of the extension leaf is possible, the least stable one shall be chosen.

For tables with non-rectangular tops, tables with pedestal-type supports, etc., follow the same procedure in principle. However, the least stable edge position for the vertical force and horizontal force shall be found by trial and error.

Test tables having extra leaves both with and without these extra leaves, and in all different positions.

## 5 Stability with vertical force

Position the table on the floor with stops against the legs along one long side of the table.

Tighten any assembly fittings.

Apply a vertical force at the centre of the tabletop along the long side that is placed against the stops and with its centre of gravity 50 mm from the outer edge of the tabletop (see the figure).

Increase the force up to any specified value or until at least one of the legs on the opposite side of the table lifts from the floor. Record the force, in newtons, to the nearest whole number.

Repeat this test with the stops against the legs along one short side of the table and with the vertical force at the centre of this short side.

## 6 Stability with vertical and horizontal forces

Apply a vertical force along the long side as in clause 5. Apply a horizontal force outward from the centre of the long side, using (for example) a strip inserted between the tabletop and the vertical force application device (see the figure).

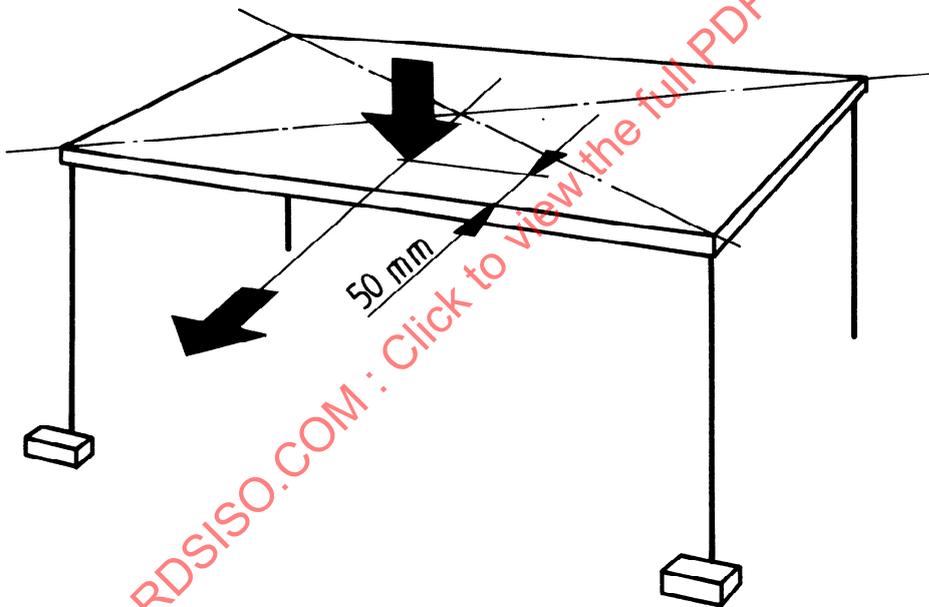
Increase the horizontal force until at least one of the legs on the opposite side of the table just lifts away from the floor. Record the force, in newtons, to the nearest whole number.

Repeat this test with the stops against the legs along one short side of the table and with the vertical force and horizontal force at the centre of this short side.

## 7 Test report

The test report shall include at least the following information :

- a) a reference to this International Standard;
- b) the piece of furniture tested (relevant data);
- c) stability with vertical force, in newtons, from clause 5;
- d) stability with vertical and horizontal forces, in newtons, from clause 6;
- e) stability with extension leaves, etc., if any, in different positions;
- f) details of any deviations from this International Standard;
- g) the name and address of the test facility;
- h) the date of test.



Figure