

INTERNATIONAL STANDARD

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Furniture — Storage units — Determination of strength and durability

*Ameublement — Éléments de rangement — Détermination de la
résistance et de la durabilité*



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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 voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 7170 was prepared by Technical Committee ISO/TC 136, *Furniture*, Sub-Committee SC 1, *Test methods*.

Annexes A and B of this International Standard are for information only.

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 International Standards:

ISO 7170:1993, *Furniture — Storage units — Determination of strength and durability.*

ISO 7171:1988, *Furniture — Storage units — Determination of stability.*

ISO 7172:1988, *Furniture — Tables — Determination of stability.*

ISO 7173:1989, *Furniture — Chairs and stools — Determination of strength and durability.*

ISO 7174-1:1988, *Furniture — Chairs — Determination of stability — Part 1: Upright chairs and stools.*

ISO 7174-2:1992, *Furniture — Chairs — Determination of stability — Part 2: Chairs with tilting or reclining mechanisms when fully reclined, and rocking chairs.*

ISO 8019:—¹⁾, *Furniture — Tables — Determination of strength and durability.*

1) To be published.

Furniture — Storage units — Determination of strength and durability

1 Scope

This International Standard describes test methods for determining the strength and durability (mainly regarding fatigue and wear) of storage units that are fully assembled and ready for use, including their movable and non-movable parts. Assessment of ageing and degradation is not included.

The tests consist of the application, to various parts of the items, of loads, forces and velocities simulating normal functional use, as well as misuse, that might reasonably be expected to occur.

The tests are designed to evaluate properties without regard to materials, design/construction or manufacturing processes.

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 deviations from the test procedure recorded in the test report.

Tests carried out according to this International Standard are intended to demonstrate the ability of the item to give satisfactory service in its intended environment. It should be understood that such tests do not ensure that structural failure will not eventually occur as a result of habitual misuse or after an excessively long period of service.

This International Standard specifies test methods only; it does not specify requirements to be met. The annexes A and B are for information only. Annex A contains parameters which may be applied to any type or design of storage unit.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions

of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 554:1976, *Standard atmospheres for conditioning and/or testing — Specifications*.

ISO/IEC Guide 45:1985, *Guidelines for the presentation of test results*.

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 static test: Test consisting of heavy loads applied several times to ensure that the furniture has sufficient strength to perform its function under the highest levels of loading that might reasonably be expected to occur.

3.2 impact test: Test to assess the strength of the article under the rapid rates of loading that occasionally occur.

3.3 durability test: Test simulating the repeated movement of components occurring during long-term use and assessment of the strength of the article under such conditions.

4 Test procedures

Two different types of test procedure exist.

4.1 For determining the level of strength and durability, testing may be carried out in sequence through the test parameters until failure occurs.