

INTERNATIONAL STANDARD

ISO
6265

Second edition
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Alpine skis — Determination of deformation load and breaking load

iTeh STANDARD PREVIEW
*Skis alpins — Détermination de la charge de déformation et de la charge
de rupture*
(standards.iteh.ai)

ISO 6265:1992

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Reference number
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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 6265 was prepared by Technical Committee ISO/TC 83, *Sports and recreational equipment*, Sub-Committee SC 4, *Skis and snowboards*.

This second edition cancels and replaces the first edition (ISO 6265:1980), of which it constitutes a technical revision.

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International Organization for Standardization
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Alpine skis — Determination of deformation load and breaking load

1 Scope

This International Standard specifies a method for determining the resistance of alpine skis to permanent deformation and breaking.

It is applicable to all sizes of alpine skis for adults, juveniles and children. Nominal ski length, l_N :

- Group 1: 1 700 mm $\geq l_N$
- Group 2: 1 400 mm $\leq l_N < 1 700$ mm
- Group 3: 1 000 mm $\leq l_N < 1 400$ mm
- Group 4: 750 mm $\leq l_N < 1 000$ mm

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was 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 edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 868:1985, *Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness)*.

3 Definitions

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

3.1 deformation load, F_D : The load which, when applied at the load application point, causes a permanent deformation of 1 mm of the ski between the supports.

3.2 breaking load, F_B : The maximum load which, when applied at the load application point, causes failure of the ski (breaking, delamination, buckling, etc.).

4 Testing machine

The general arrangement of the bending testing machine is shown in figure 1.

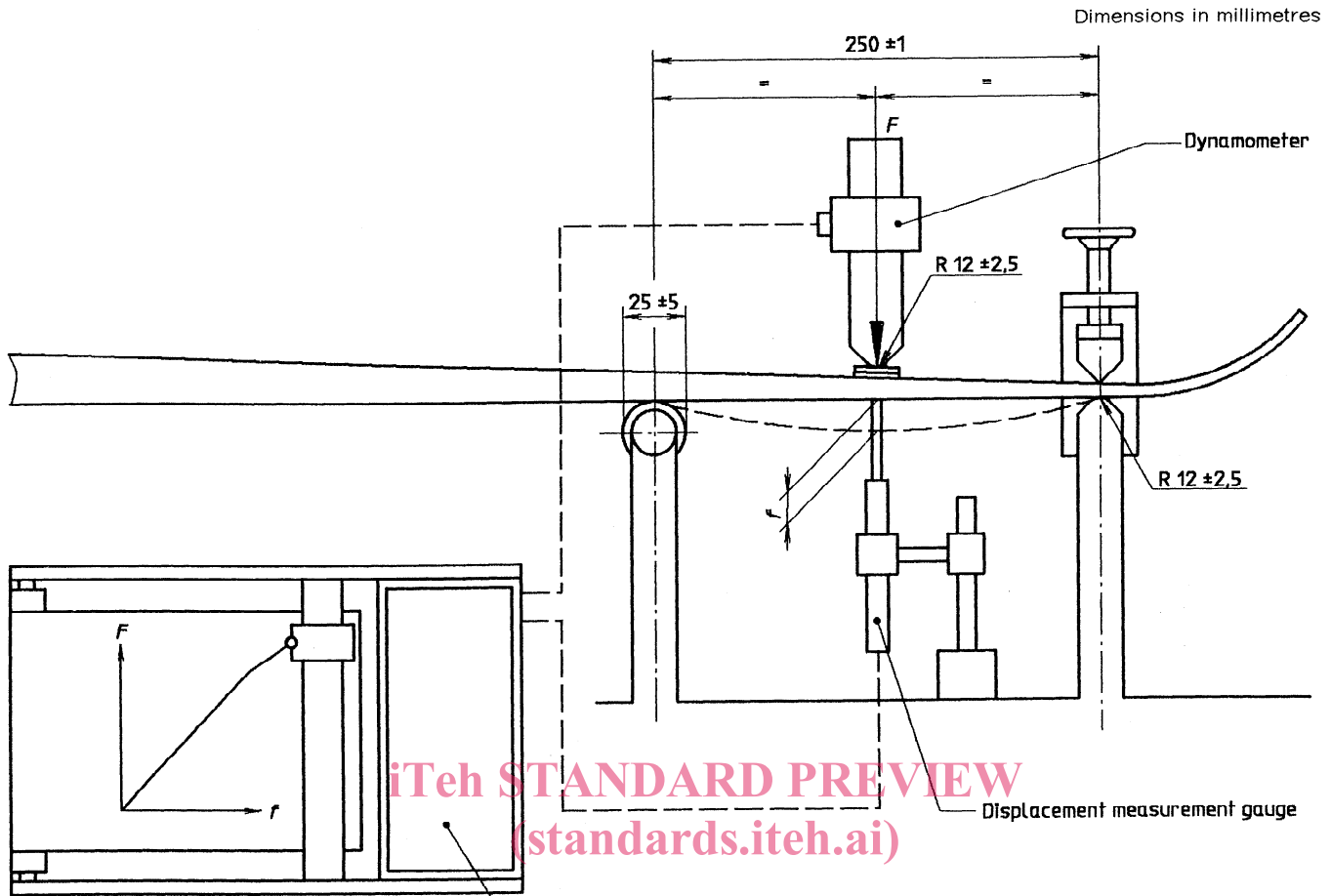
The bending testing machine (universal tension and compression testing machine with bending fixture) shall comprise

- a) two specimen supports, at least 250 mm apart, at least one of which shall be a low friction roller;
- b) a dynamometer, having a range of at least 20 000 N, for measurement of the load, F ;
- c) a displacement measurement gauge for measurement of the deflection, f .

The load shall be applied to the ski via a ram plate (see figure 2), which shall consist of a steel plate, 4 mm thick, and a hard rubber layer, 3 mm thick and having a Shore A hardness of 95 ± 5 (see ISO 868).

Measurement data shall be recorded by means of a load-displacement recorder (see figure 3).

The specimen supports, as well as the ram plate, shall reach over the whole width of the ski.



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Figure 1 — Testing machine

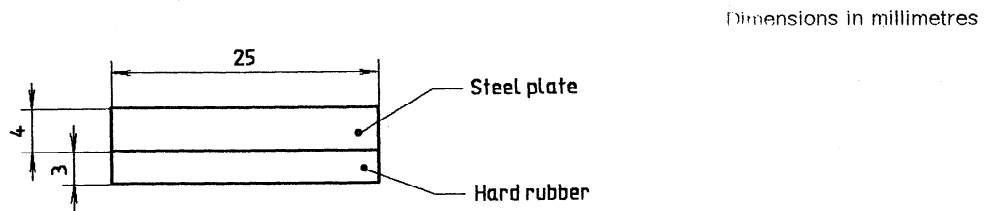


Figure 2 — Ram plate

5 Determination of the load application point

In order to obtain comparable values, the test shall be carried out at the load application point with a separation between the supports of $250 \text{ mm} \pm 0,5 \text{ mm}$.

Determine the load application point by moving the ski in a longitudinal direction on the supports until a deflection of

$2 \text{ mm} \pm 0,03 \text{ mm}$	—	for group 1;
$4 \text{ mm} \pm 0,03 \text{ mm}$	—	for group 2;
$6 \text{ mm} \pm 0,03 \text{ mm}$	—	for group 3;
$8 \text{ mm} \pm 0,03 \text{ mm}$	—	for group 4;

is obtained under a load of $600 \text{ N} \pm 5 \text{ N}$.

If under this procedure more than one load application point can be determined, the load application point which is nearest to the front shall be used.

6 Conditioning

Condition the ski at a temperature of $23^\circ\text{C} \pm 5^\circ\text{C}$.

7 Test procedure

Insert the ski in the testing machine and fix it on the supports in such a way that the load application point is located midway between the supports.

NOTES

1 It is important that the stiffness of the ski at the load application point lies within the tolerance range of $\pm 3\%$.

2 Testing at positions other than the load application point will result in false values for the deformation load and the breaking load.

Load the ski at a rate sufficient to increase the deflection by 25 mm/min , until the ski breaks.

Record the load-deflection values by means of the load-displacement recorder.

8 Evaluation

Determine the deformation load and the breaking load from the load-deflection chart as follows.

8.1 Deformation load

From the point of the abscissa corresponding to a 1 mm deflection, draw a straight line parallel to the linear portion of the load-deflection curve. The value of the deformation load, F_D , is given by the point of intersection of this line with the curve (see figure 3).

8.2 Breaking load

The breaking load, F_B , is the maximum load measured during the test, i.e. the maxima of the curve.

9 Test report

The test report shall include the following information:

- reference to this International Standard, i.e. ISO 6265;
- the brand of ski tested;
- the designation of the model;
- the nominal length;
- the manufacturer's registration number;
- the load-deflection chart together with the deformation and breaking loads;
- any deviation from the procedure of this International Standard and the reasons for this deviation.

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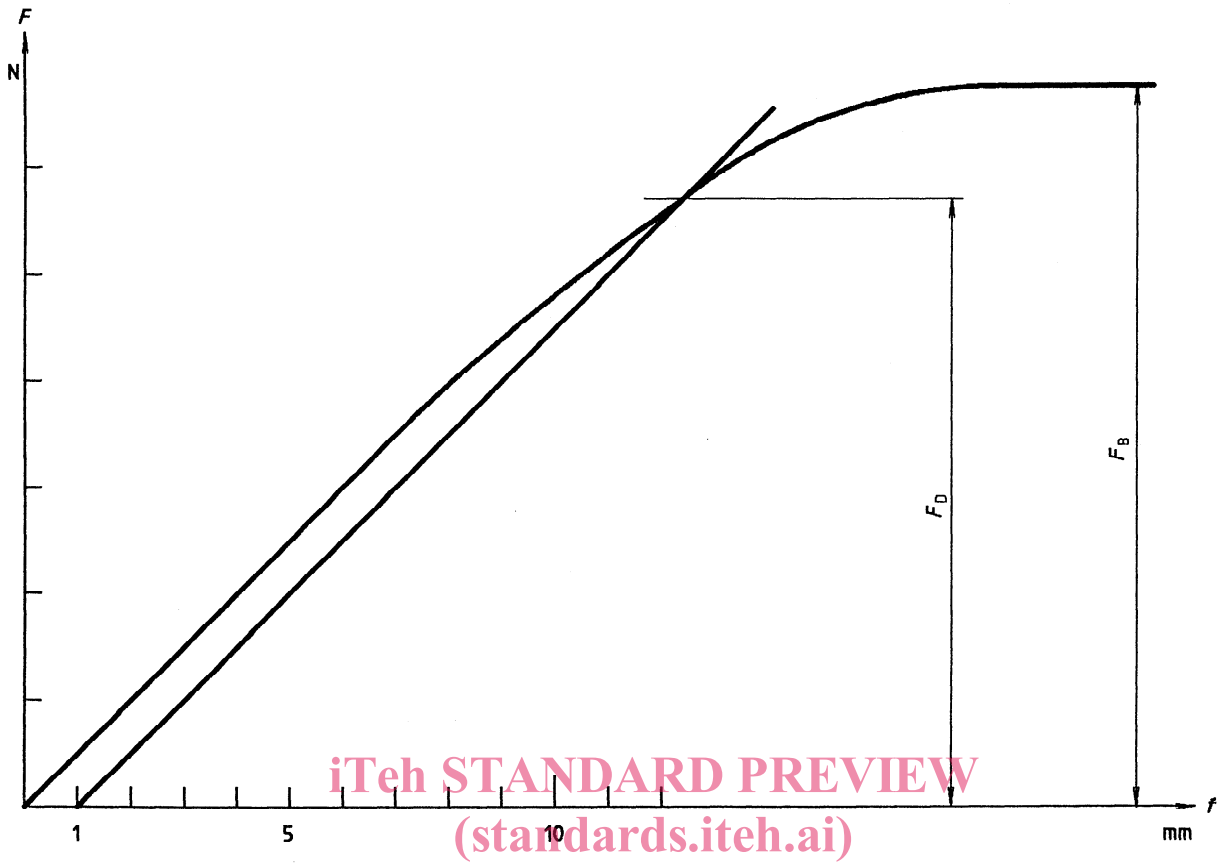


Figure 3 — Typical load-deflection curve and method of evaluation
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