
International Standard



7138

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Cross-country skis — Determination of mass and location of balance point

Skis de fond — Détermination de la masse et de l'emplacement du point d'équilibre

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[ISO 7138:1984](https://standards.iteh.ai/catalog/standards/sist/57dbb2b7-18e6-4728-b335-8a873e33e2e0/iso-7138-1984)

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Descriptors : sports equipment, skis, cross country skis, tests, determination, mass.

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.

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 7138 was prepared by Technical Committee ISO/TC 83, *Sports and recreational equipment*.

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Cross-country skis — Determination of mass and location of balance point

1 Scope and field of application

This International Standard specifies laboratory measurement methods for mass and location of the balance point of cross-country skis.

If laboratory measurement data are determined and published by manufacturers or other institutions, standard measurement procedures are recommended to ensure comparability.

It is not the purpose of this International Standard to evaluate the measurement data with regard to their influence on the quality of the ski.

2 Definitions

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

2.1 mass of the ski : The mass of a finished manufactured ski without any mounted parts.

2.2 balance point, BP : A line perpendicular to the centre line of the running surface at which the ski is in horizontal equilibrium (balanced) when placed on a fulcrum.

3 Apparatus

3.1 Weighing device, accurate to ± 20 g.

3.2 Horizontal fulcrum, for the determination of the balance point as shown in figure 1.

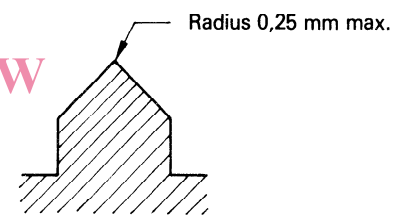


Figure 1 — Fulcrum

4 Sampling and conditioning

In order to ensure comparability it is recommended to use for publication only data of the following ski sizes :

150, 180 or 200 cm

From these three sizes the one which is most representative for the intended application shall be selected for the ski model concerned.

All measurements shall be taken from a finished ski without any ancillary equipment.

All measurements shall be carried out on a ski which has been conditioned at a temperature of 23 ± 5 °C for at least 2 h.

5 Procedure

5.1 Weigh the ski, to the nearest 20 g, with the weighing device (3.1).

5.2 Place the ski on the fulcrum (3.2) and determine the balance point.

Indicate the location of the balance point by its distance X_{BP} from the rear end of the ski as shown in figure 2.

6 Expression of results

6.1 Report the mass of the ski in grams.

6.2 Report the balance point by indicating the distance X_{BP} .

7 Tolerances

If data are published by the manufacturer with reference to this International Standard, the following tolerance ranges shall be observed :

mass : $\pm 10 \%$

balance point : distance from the ski end $\pm 2 \%$.

8 Test report

The test report shall include the following particulars :

- reference to this International Standard;
- name of distributor or manufacturer;
- trade mark and model designation;
- nominal length;
- imprinted serial number;
- test results (see clause 6);
- any deviation from this International Standard with an explanation of the reason for the deviation.



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Figure 2 — Distance of the balance point from rear end of ski