
**Alpine skis — Guidelines for conducting
slope performance tests**

*Skis alpins — Principes directeurs pour la réalisation d'essai de
performance*

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ISO 8783:1999

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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 8783 was prepared by Technical Committee ISO/TC 83, *Sports and recreational equipment*, Subcommittee SC 4, *Skis and Snowboards*.

This first edition cancels and replaces ISO/TR 8783:1985, of which it constitutes a technical revision.

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Alpine skis — Guidelines for conducting slope performance tests

1 Scope

This International Standard provides guidelines for carrying out comparative testing of alpine skis with the objective of evaluating the performance characteristics.

It is applicable to alpine skis in accordance with ISO 6289.

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 6289:1985, *Skis — Terms and definitions*.

3 Terms and definitions

[ISO 8783:1999](https://standards.iteh.ai/catalog/standards/sist/7a3c8ade-4eb7-405e-afbf-b8b31631145d/iso-8783-1999)

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For the purposes of this International Standard, the terms and definitions given in ISO 6289 and the following apply.

3.1

edge grip

ski characteristic pertaining to the prevention of undesired side-slipping on hard snow for a given slope steepness and a given edging angle

3.2

turn initiation

ski characteristic pertaining to the force which is needed to initiate the turn

NOTE The less force and movement required, the greater the turnability.

3.3

stability

ski characteristic pertaining to maintaining direction at a given speed when subjected to alternating left and right deviations

3.4

carving turn

ski characteristic pertaining to the execution of a carved turn of a given radius on hard snow with minimal skidding or chattering

3.5

steering behaviour

ski characteristic pertaining to the execution and completion of a turn, in order to change direction

4 Principle

Evaluation of ski performance through

- subjective and comparative rating by competent test personnel based on the test criteria provided, and
- statistical support by using sufficient individual results with regard to test personnel, terrain conditions and test skis.

5 Test conditions

The test run shall provide terrain on which all skiing manoeuvres can be carried out. The site shall permit every tester to conduct the same manoeuvres at the same place on the slope.

The test shall be carried out in hard and well-prepared snow conditions.

Each tester shall test every ski of a predetermined group of skis. Skis belonging to the same category of test skis shall be tested within one day, provided that snow conditions do not change considerably during the course of the day. If snow conditions do change considerably within the course of the day, the test shall be interrupted and be continued, provided snow conditions are comparable, on the next day.

6 Test personnel

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6.1 Requirements

The test personnel shall be independent, neutral and discreet, as responsible experts.

6.2 Skiing ability

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The skiing ability of personnel shall be such that a representative evaluation of the skis in accordance with the test run is ensured. The physical condition of personnel shall be adequate for the tasks of the test. The physical condition and the skiing ability should not change significantly during the course of the test. The tester shall be capable and shall be trained to use ski techniques according to the test criterias and also to perform skiing motions treated as single movements.

6.3 Assessment ability

The tester shall be completely informed about all evaluation criteria and about the system rating scale.

7 Test committee

Tests shall be supervised by a test committee consisting of at least three technical experts and the test supervisor.

The test committee shall determine, by majority vote, when the conditions are adequate for testing.

8 Test skis

The test skis shall be typical of the model to be tested and shall be tested as delivered by the manufacturer. The test skis shall be inspected and if, in the course of the test, retuning turns out to be necessary, this shall be done in accordance with manufacturer's instructions.

The running surfaces shall be cleaned and uniformly waxed in accordance with the snow conditions at the time of the test.

For each tester, the boot and binding shall be fitted correctly in relation to the mounting point of the ski, for example by the use of bindings with a movable toe-piece.

9 Rating

9.1 Criteria

The criteria to be tested are listed below:

- edge grip,
- turn initiation,
- stability,
- carving turn,
- steering behaviour.

9.2 Classification

For proper comparative rating, it is necessary to use a reference ski. This reference ski shall be used repeatedly by all testers. Test skis are rated by comparison with the performance of the reference skis.

To judge characteristics, a rating scale of five grades should be used:

- very good, <https://standards.iteh.ai/catalog/standards/sist/7a3c8ade-4eb7-405e-afbf-b8b31631145d/iso-8783-1999>
- good,
- satisfactory (no special positive or negative characteristics),
- poor,
- very poor.

10 Preparation

The test ski shall be tested in an undamaged condition only (free of burrs). When the running surface is damaged considerably, the ski shall be withdrawn from the test for refurbishment of the damaged area.

There shall be no tests prior to the official test and nobody shall be allowed to ski on the test skis prior to the official test.

11 Additional tuning elements (damping plates)

If a ski model is sold exclusively with such additional attached/mounted elements, this ski model may be tested in its category together with comparable skis which do not feature this kind of element.

If a ski model can be tuned by means of optional elements in order to alter its performance, then it should be possible to test this particular function as well, or it should be possible to conduct a separate test for the ski with the tuning elements.

12 Binding

All test skis shall be equipped with identical binding systems; this shall be ensured by the test organization.

Exception: If it is necessary, because of technical reasons, to use a harmonized system consisting of ski and/or binding, and/or ski boot, an exceptional solution may be found in agreement with the test committee.

13 Test report

The test report shall include the following information:

- a) a reference to this International Standard;
- b) an indication of whether the skis are tested as delivered or whether they have been treated for the test;
- c) a description of the skis tested and their lengths;
- d) individual ratings given;
- e) total scores and standard deviations;
- f) any significant deviation from the average of the skis and testers (e.g. tester's weight or height, skis length, width, side cuts).

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14 Publication of test results (standards.iteh.ai)

Published test results shall provide information on all test and snow conditions.

If ski characteristics are described verbally, only clearly defined technical terms should be used.

If the publication provides information in the form of an overall score, the weight of individual ratings and the reasoning for this weighting system shall be explained. All considerations which have led to the overall score shall be published.

An appropriate person or body shall take legal responsibility for carrying out tests and publication of the test results.

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