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Touring ski-boots for adults — Interface with touring ski-bindings — Requirements and test methods

Chaussures de ski de randonnée pour adultes — Zone de contact avec les fixations de skis de randonnée — Exigences et méthodes d'essai

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 9523 was prepared by Technical Committee ISO/TC 83, *Sports and recreational equipment*, Subcommittee SC 3, *Ski bindings*.

This second edition cancels and replaces the first edition (ISO 9523:1990), which has been technically revised.

The requirements of ISO 9523:2008 become valid as of the date of publication of this second edition. However, the provisions specified in the first edition (ISO 9523:1990) remain valid for a further 2 years beyond the date of publication of this second edition.

In this corrected version of ISO 9523:2008 changes have been made to the following illustrations.

— Page 3, Figure 1: detail “C-C” and “D-D” of the figure; dimension “mm” in the NOTE; replacement of footnote[a] by an indication on the drawing of the scale of the section.

— Page 7, Figure 5: Appearance of shaded areas.

— Page 13, Figure 11: Outlining of shaded area; figure title.

— Page 14, Figure 12: Outlining of shaded area; appearance of shaded areas; projection method used; addition of item reference “1” to the side view.

Touring ski-boots for adults — Interface with touring ski-bindings — Requirements and test methods

1 Scope

This International Standard specifies the dimensions and characteristics of the interface, requirements, test methods and marking of ski-boots with a rigid sole (see 3.5) which are used with current systems of touring ski-bindings with attachment at the boot toe and boot heel, the proper release function of which depends on the dimensions and design of the interfaces.

For ski-binding systems that function irrespective of the sole shape or that have different requirements for the sole dimensions, it is not always necessary for the ski-boot soles to comply with this International Standard in order to achieve the desired degree of safety.

This International Standard applies to ski-boots of sizes 15,0 and larger in the Mondopoint system (see Annex A).

It applies to rigid touring boots. Boots with softer shells like Telemark boots are excluded as they do not have the necessary shell stability to act as part of the release systems.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

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

ISO 5355, *Alpine ski-boots — Requirements and test methods*

ISO 9407, *Shoes sizes — Mondopoint system of sizing and marking*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5355 as well as the following apply.

3.1
interface
that part of the ski-boot intended for contact with the ski-binding

3.2
toe interface
that part of the ski-boot intended to fit with the front binding

3.3
heel interface
that part of the ski-boot intended to fit with the rear binding

3.4
free space
space intended to avoid contact between ski-boots and binding, especially during step in/step out or release

3.5
rigid ski boot sole
ski boot sole which does not flex when walking

NOTE See 4.3.5.1.

3.6
median plane
middle plane of the sole, longitudinal and perpendicular to the bearing surface

3.7
bearing surface
toe or heel surface of the boot sole which is in contact with a plane on which the boot is standing

3.8
ski-brake
device to stop the ski after release of the binding

4 Requirements and test methods

4.1 General

If no specific test methods are indicated, check the characteristics as appropriate, e.g. by measurement.

If not otherwise indicated, execute the testing under standard atmosphere 23/50 (see ISO 554) with ordinary tolerances.

4.2 Dimensions

The dimensions of the boot toe and heel shall correspond to Figure 1. Other boot dimensions need not correspond to Figure 1.

Fundamentally, all dimensions shall be within the indicated tolerance. However, relevance to safety varies in importance depending on the indicated dimensions.

Looking at several dimensions (“dimensions of the 2nd degree”, see Annex B), a deviation from the tolerances may be accepted, provided that the following requirements are respected.

a) The deviations remain exceptional.

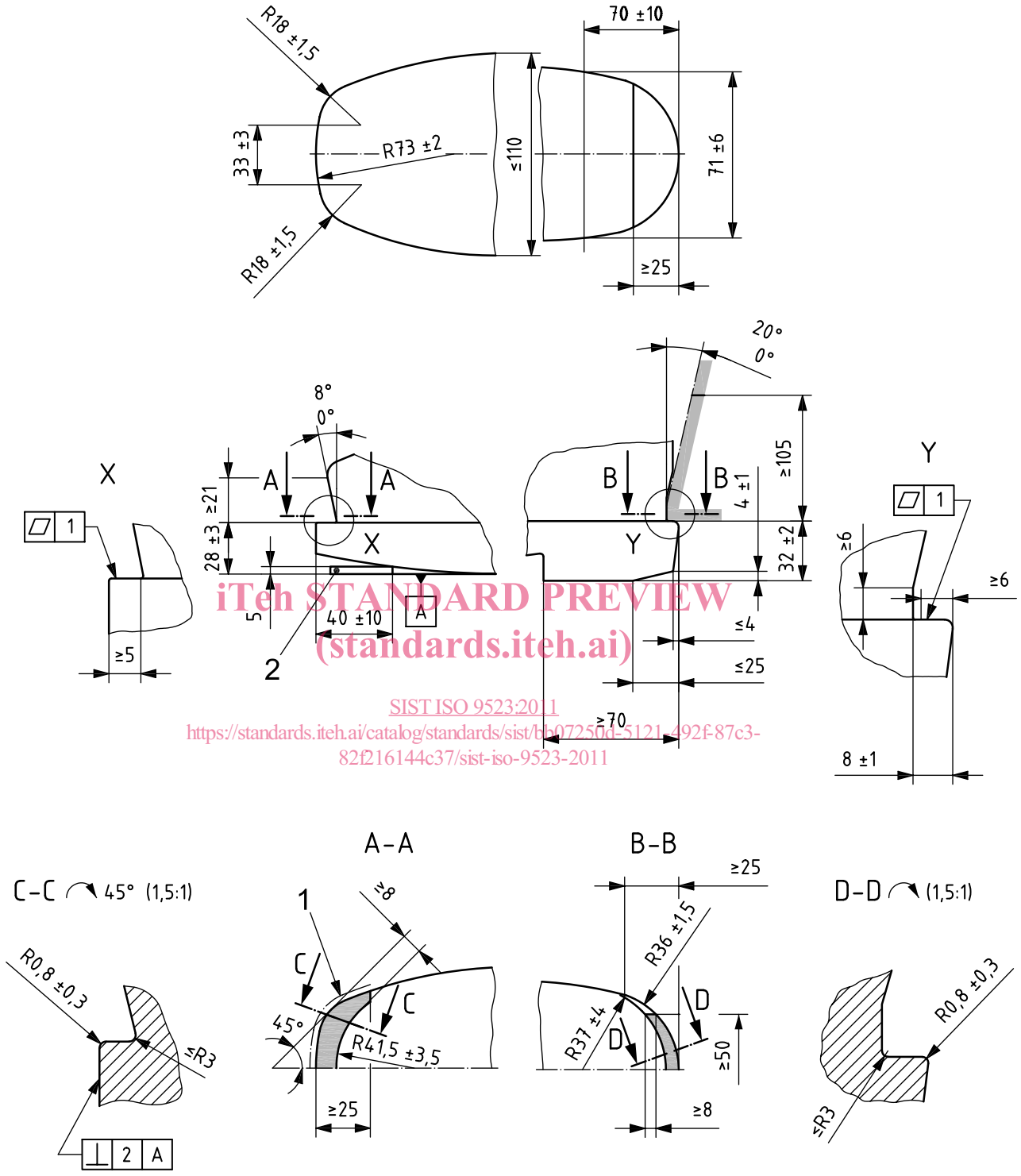
b) The deviations are small.

c) No limitations of function arise with all marketable and critical bindings.

d) The tolerance is respected at the next possible chance (e.g. reconstruction of a tool).

The gauge (see Key 2 in Figure 1) shall be wider than the boot sole.

Dimensions in millimetres



Key

1 area where perpendicularity tolerance is valid

2 gauge

NOTE Shaded areas are those in which the tolerance of evenness and the dimensions 28 mm ± 3 mm and 32 mm ± 2 mm are valid.

Figure 1 — Dimensions of boot toe and heel

4.3 Design

4.3.1 Sole length

The sole lengths of the two ski-boots in a pair shall not differ by more than 2 mm.

4.3.2 Boot sole interface

The sole dimensions in the toe and heel boot binding interface areas shall be symmetrical about the median plane within an admissible deviation of 1 mm.

There shall be no protrusion of the sole beyond the shell for the whole perimeter of the whole boot sole interface areas.

4.3.3 Side walls at boot toe

The side walls of the sole at the boot toe, up to a distance of at least 25 mm from the toe end, shall be perpendicular to the bearing surface within an admissible inward-outward deviation as is described in Figure 1, section C-C.

If the side walls of the sole are built in two parts, it shall be ensured that no part of the lower area of the sole protrudes beyond the upper profile.

4.3.4 Side walls at boot heel

The lateral side walls of the sole at the boot heel, up to a distance of at least 70 mm from the heel end, shall be perpendicular to the bearing surface, or tapered inwards-outwards between 0° and 10° up to a height of 14 mm.

If lateral grooves of more than 2 mm depth are present at the heel (see Figure 2), supports at least complying with Figure 3 shall remain.

Other configurations of grooves are allowed if they have no influence on the mechanism and function of the boot/binding system.

Dimensions in millimetres

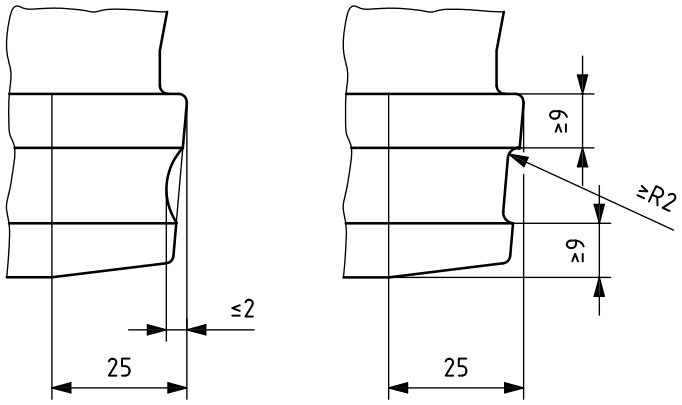


Figure 2 — Lateral grooves at heel

Dimensions in millimetres

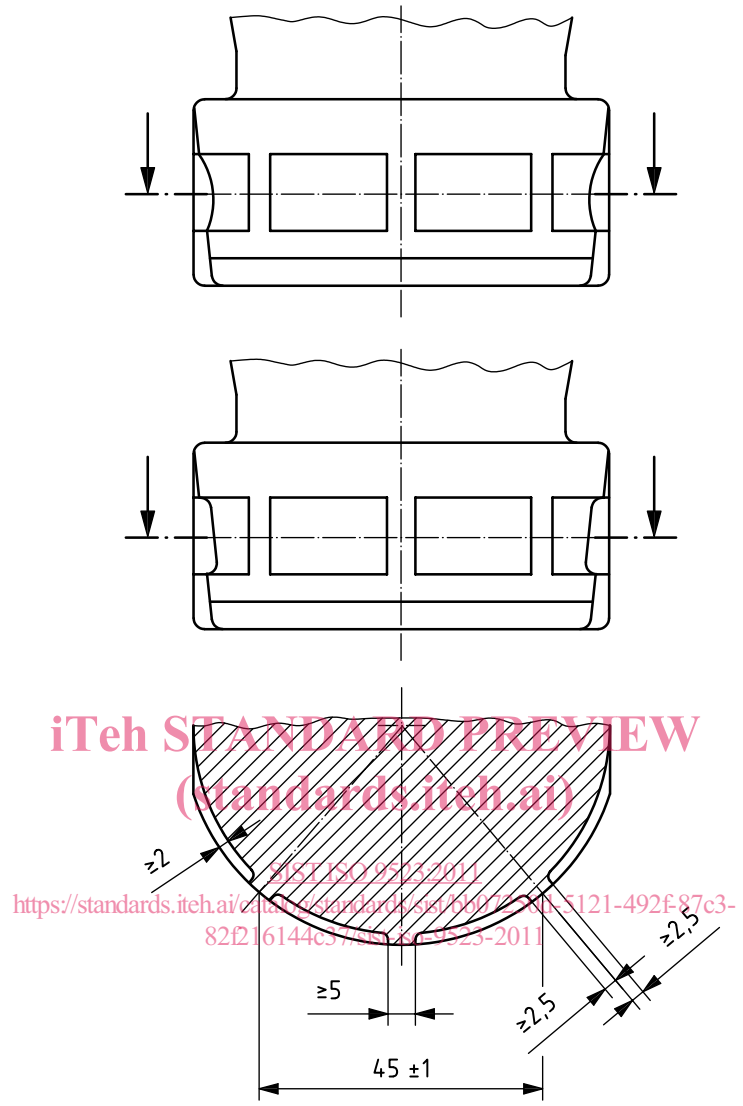


Figure 3 — Lateral supports at heel

4.3.5 Rigidity

4.3.5.1 Requirements

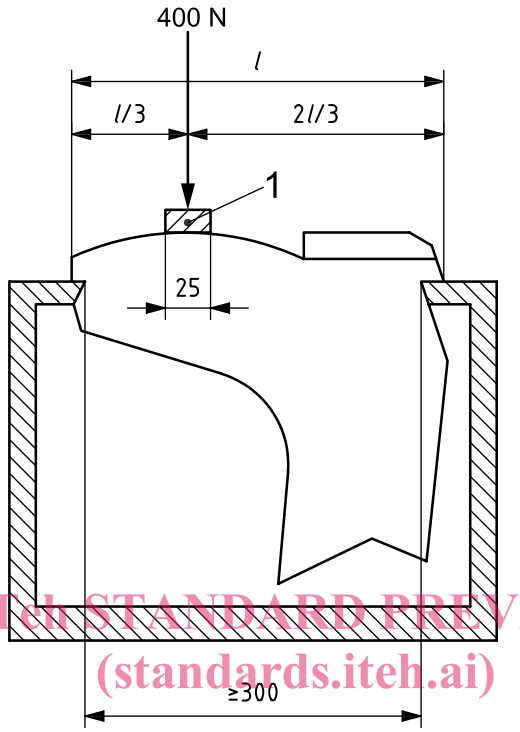
When measured in accordance with 4.3.5.2, the sole shall not deflex more than 5 mm.

NOTE This is to avoid any contact point outside the frontal zone and the boot sole interface area (see Figure 5) in order to ensure proper lateral release function.

4.3.5.2 Test method

The rigid metal test bar (width 25 mm) shall cover the whole width of the sole (see Figure 4).

Dimensions in millimetres



Key

1 rigid metal test bar

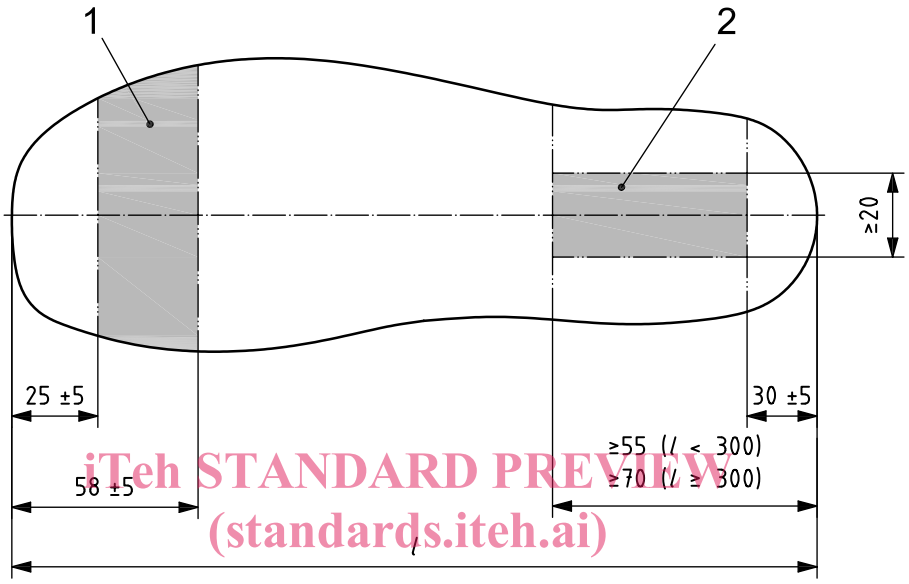
Figure 4 — Testing of rigidity

4.3.6 Boot sole interface areas with the binding

The boot sole interface areas shall conform to Figure 5.

In the toe interface area (see Key 1 in Figure 5) and in the heel interface area (see Key 2 in Figure 5) there shall be no gaps > 10 mm between two studs in any direction.

Dimensions in millimetres



Key

1 toe interface area
2 heel interface area
l length of sole

Figure 5 — Contact zones with the binding

Table 1 — Boot sole interface area with the binding

Interface area	Percentage of the area in contact with the bearing surface of the binding
Toe	> 25
Heel	> 40