

International Standard



7265

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Cross-country skis — Binding mounting area — Static screw retention strength — Requirements and test method

Skis de fond — Zone de montage de la fixation — Résistance à l'arrachement statique des vis — Spécifications et méthode 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 developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized 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.

International Standard ISO 7265 was developed by Technical Committee ISO/TC 83, *Sports and recreational equipment*, and was circulated to the member bodies in September 1983.

It has been approved by the member bodies of the following countries:

Austria	Germany, F.R.	Sweden
Czechoslovakia	India	Switzerland
Egypt, Arab Rep. of	Italy	USA
Finland	Japan	USSR
France	South Africa, Rep. of	

The member body of the following country expressed disapproval of the document on technical grounds:

Poland

Cross-country skis — Binding mounting area — Static screw retention strength — Requirements and test method

1 Scope and field of application

This International Standard specifies minimum values for the screw retention strength of the binding mounting area of cross-country skis and specifies a method of test for determining the static screw retention strength. Different values are specified for two groups of sizes.

- Group 1: from 130 cm to 175 cm
- Group 2: from 180 cm to 220 cm

It specifically excludes alpine skis. It also excludes skis intended for use with cable bindings.

1.1 A designated binding attachment area, hereafter referred to as the "binding mounting area", shall be provided by the ski manufacturer in accordance with ISO 7264 and shall be the only area of the ski subjected to this test and may be specially reinforced.

1.2 This International Standard covers skis the bindings of which are attached by means of screws in area A_1 and screws, nails or other fasteners in area A_2 .

1.3 Using test screws loaded normal to the ski surface, the method of test specified herein simultaneously controls the tendency of screws to be pulled out, skis to delaminate, and screw hole threads to strip.

2 References

ISO 7264, *Cross-country skis — Dimensions of the binding mounting area for toe clip bindings.*

ISO 7793, *Cross-country skis — Binding mounting area — Stripping torque — Requirements and test method.*¹⁾

3 Definitions

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

3.1 **screw retention strength F_R , in newtons:** Characteristic of the ski which quantifies resistance to pull-out

forces on a pair of screws under conditions as defined in clauses 5 and 7.

3.2 **minimum screw retention strength, $F_{R\min}$, in newtons:** Value of screw retention strength as indicated in clause 4.

3.3 **penetration depth d , in millimetres:** The depth, the binding mounting screw penetrates the ski (see figure 1).

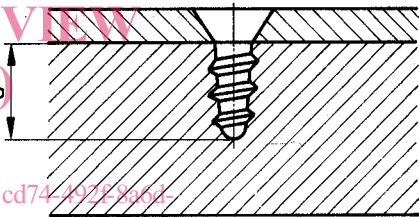


Figure 1 — Penetration depth d of the screw

3.4 **tightening torque M_T , in newton metres:** The moment specified in the mounting instructions or in the test procedure, which is used to tighten the ski binding screw to ensure sufficient fastening.

4 Requirements

The values given in table 1 for the penetration depth d and for the minimum screw retention strength $F_{R\min}$ shall be observed.

Table 1

Group	Area A_1		Area A_2	
	d	$F_{R\min}$	d	$F_{R\min}$
	mm	N	mm	N
1	10 + 0,5	1 300	10 + 0,5	500
2	14 ± 0,5	1 600	14 ± 0,5	500

1) At present in the stage of draft.

Dimensions in millimetres

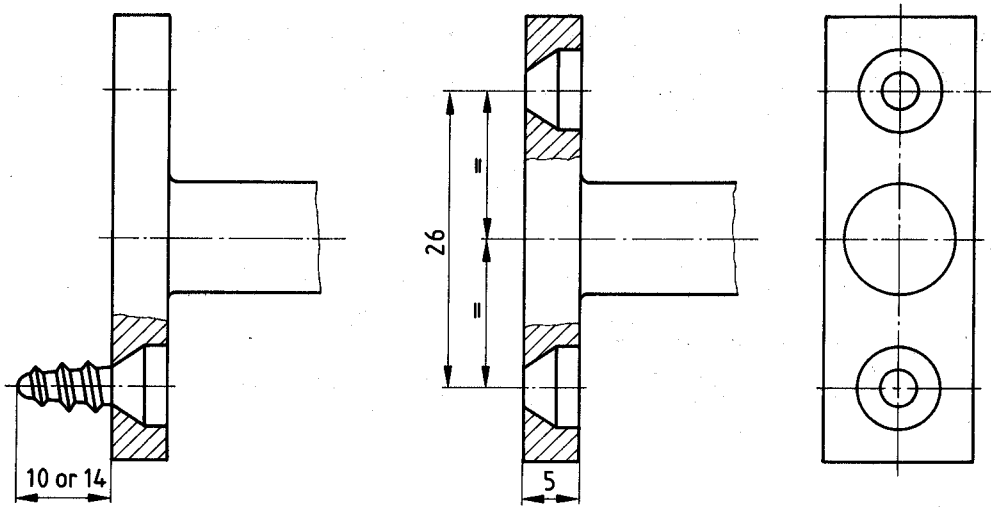


Figure 2 — Attachment element

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Dimensions in millimetres

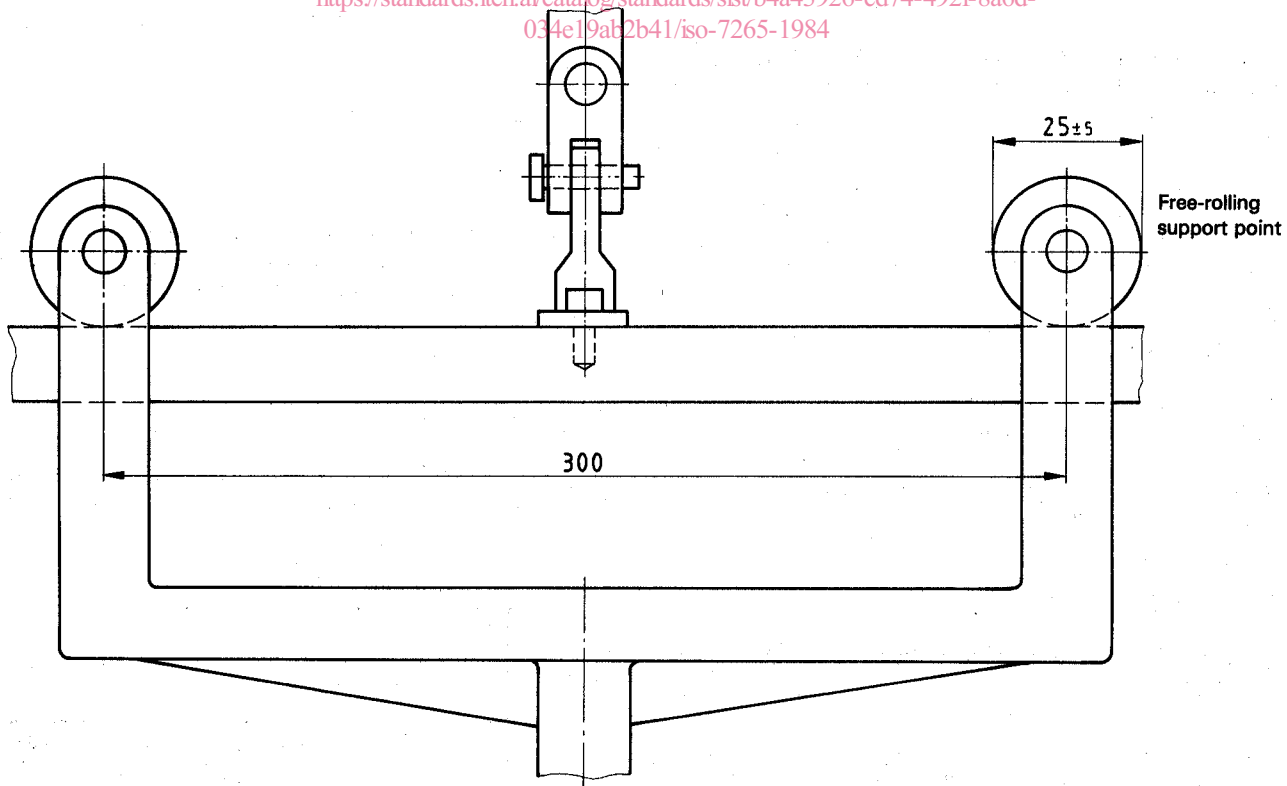


Figure 3 — Test fixture

5 Apparatus

Dimensions in millimetres

5.1 Tensile testing machine

The tensile testing machine used shall provide a loading rate accuracy of $\pm 20\%$ and a load measurement accuracy of $\pm 1\%$ with a minimum load range of 5 000 N.

5.2 Test fixture (see figure 3)

The test fixture shall consist of:

- a) an attachment element according to figure 2 made of cold rolled steel or equivalent;
- b) an universal joint which is connected to the attachment element and to the clamping device of the test machine;
- c) a ski support with two support rollers 300 mm apart.

The test fixture shall be a self-aligning type (so that no moment is imposed on the screw pattern).

6 Test screw

Screws used for attachment of the attachment element, described in 5.2, and for the test of the static retention strength shall meet the requirements of figure 4.

NOTE — To ensure reproducibility of the test results, it is recommended to use the "SKIKRUE Pz/Sdv — SPOR No. 3".

7 Procedure

7.1 Conditioning

The ski shall be tested under room temperature conditions ($20 \pm 2\text{ }^{\circ}\text{C}$), without specific preconditioning.

7.2 Mounting of the attachment element

The attachment element shall be attached to the ski by means of two test screws in conformance with clause 6.

Accurately locate and drill the holes to the depth indicated in table 2 using a drill jig, ensuring that the drill holes are perpendicular to the surface of the ski.

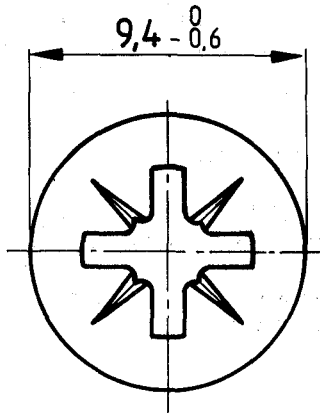
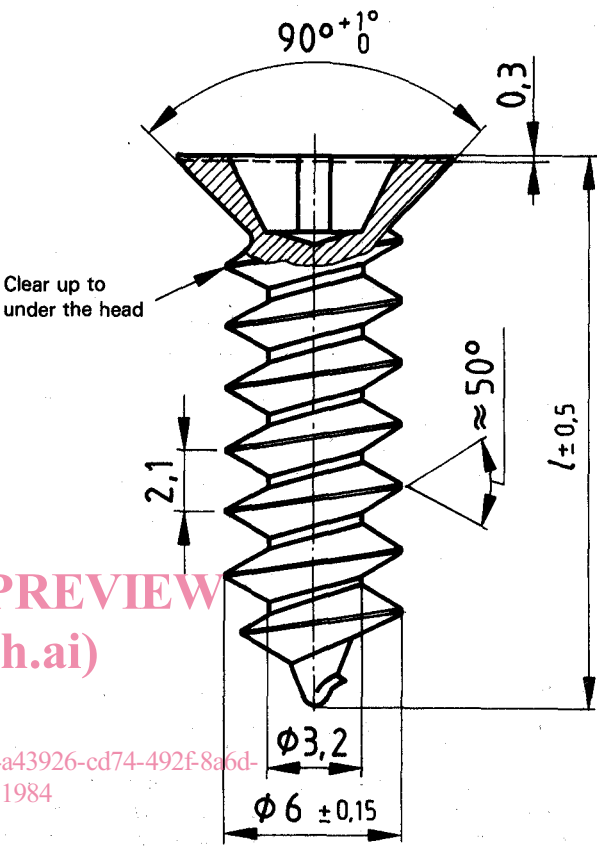
Table 2

Dimensions in millimetres

Group	Area A ₁ hole depth	Area A ₂ hole depth
1	10,5	10,5
2	14,5	14,5

The drill hole diameter shall be 3,6 mm H 12 or according to the recommendations of the ski manufacturer.

Mount the screws perpendicular to the top surface of the ski, without pretapping and without lubrication. The maximum screw tightening torque shall be 3 N·m.



Group	Screw length, l
1	17
2	13

Figure 4 — Test screw

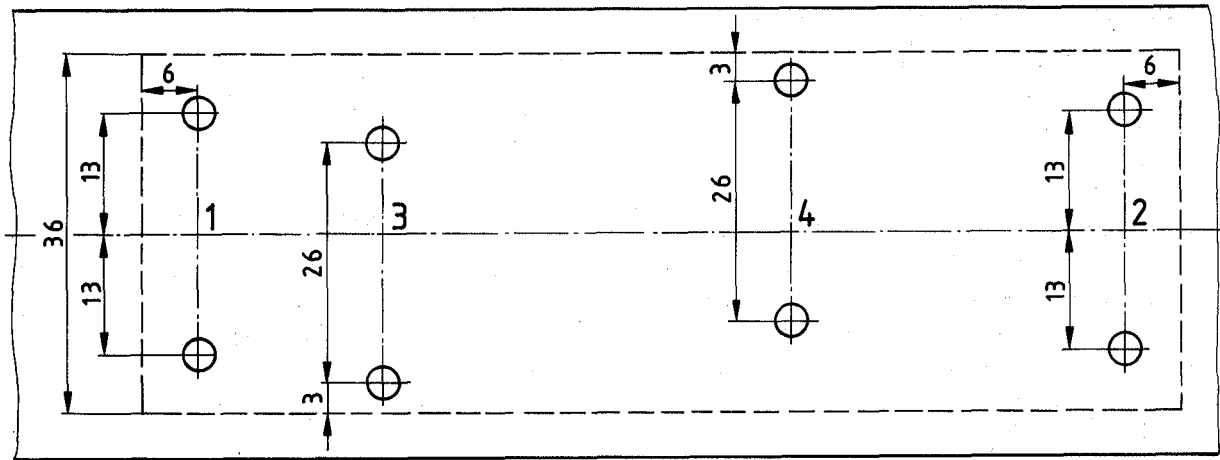


Figure 5 — Positioning of the attachment element

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7.3 Positioning of the attachment element within the binding mounting area

The location of the attachment element within the binding mounting area is shown in figure 5. Locations ③ and ④ are chosen at random in the longitudinal direction but the minimum spacing shall be 25 mm.

The test shall be carried out for both binding mounting areas A_1 and A_2 . The order of the testing shall follow the sequence 1, 2, 3 and 4.

7.4 Load application

Loading rate shall be quasistatic, i.e. 5 mm/min $\pm$ 20 %. Load the ski until it fails. The maximum load which is applied up to the moment when the two test screws are pulled out or the top skin of the ski is delaminated is the screw retention value for this particular test point.

Data intended for publication shall be determined from at least 10 measurements.

8 Test report

The test report shall include the following particulars:

- a) reference to this International Standard;
- b) complete identification of the ski tested (brand, model designation, nominal length, year of manufacture, serial number);
- c) description of the test machine used (type, load range and loading rate);
- d) sketch showing locations ③ and ④;
- e) test results and type of failure for tests 1, 2, 3 and 4;
- f) any deviation from this International Standard and reasons for this deviation.