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**ISO
7795**

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Cross-country skis — Ski-binding screws — Test methods

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[ISO 7795:1994](#)

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Reference number
ISO 7795:1994(E)

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 7795 was prepared by Technical Committee ISO/TC 83, *Sports and recreational equipment*, Subcommittee SC 4, *Skis and snowboards*.

[ISO 7795:1994](#)

This second edition cancels and replaces the first edition (ISO 7795:1984), which has been technically revised.

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Cross-country skis — Ski-binding screws — Test methods

1 Scope

This International Standard specifies test methods for the determination of the mounting and fastening characteristics of screws which are intended for fastening ski binding to cross-country skis.

Requirements are specified in ISO 7794.

The results of these test methods characterize only the properties of the screw and give no information about the actual mounting and fastening characteristics of different ski models, these being specified in ISO 9119.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were 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 editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7794:1991, *Cross-country skis — Ski binding screws — Requirements*.

ISO 9119:1990, *Cross-country skis — Binding mounting area — Requirements and test methods*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 7794 apply.

4 Apparatus

4.1 Test assembly

The tests shall be performed on five test assemblies representative of material configurations and with dimensions similar to those of a cross-section of the binding mounting area of a cross-country ski of a commonly used brand mark.

4.2 Drill and test jig

A jig, as shown in figure 1, shall be used for drilling the holes and also for determining the driving torque and the stripping torque.

Used with a removable drill bushing, the jig shall ensure an exact drill hole of diameter 3,6 mm, perpendicular to the top surface of the test assembly.

The jig shall also ensure that the screw is set and mounted perpendicular to the top surface of the test assembly.

The jig is equipped with a friction plate (see figure 2) provided with conical or straight holes, depending on the type of screw head. It is made of steel with a Brinell surface hardness of 135 HB 30.

The countersink of the friction plate shall be machined with a precision tool in order to ensure correct dimensions. The surface roughness shall be such that no vibration marks are visible.

4.3 Pull-out apparatus

Two rolls, of diameter 30 mm, and 250 mm apart, shall be used to support the test assembly together with an attachment plate. See figure 3.

5 Procedure

5.1 Determination of driving torque

5.1.1 Using the drill jig (4.2), drill a hole of diameter 3,6 mm H12 ($+0,12$ mm) and depth 10,5 mm ($+0,5$ mm) in the test assembly (4.1). The hole shall not be tapped.

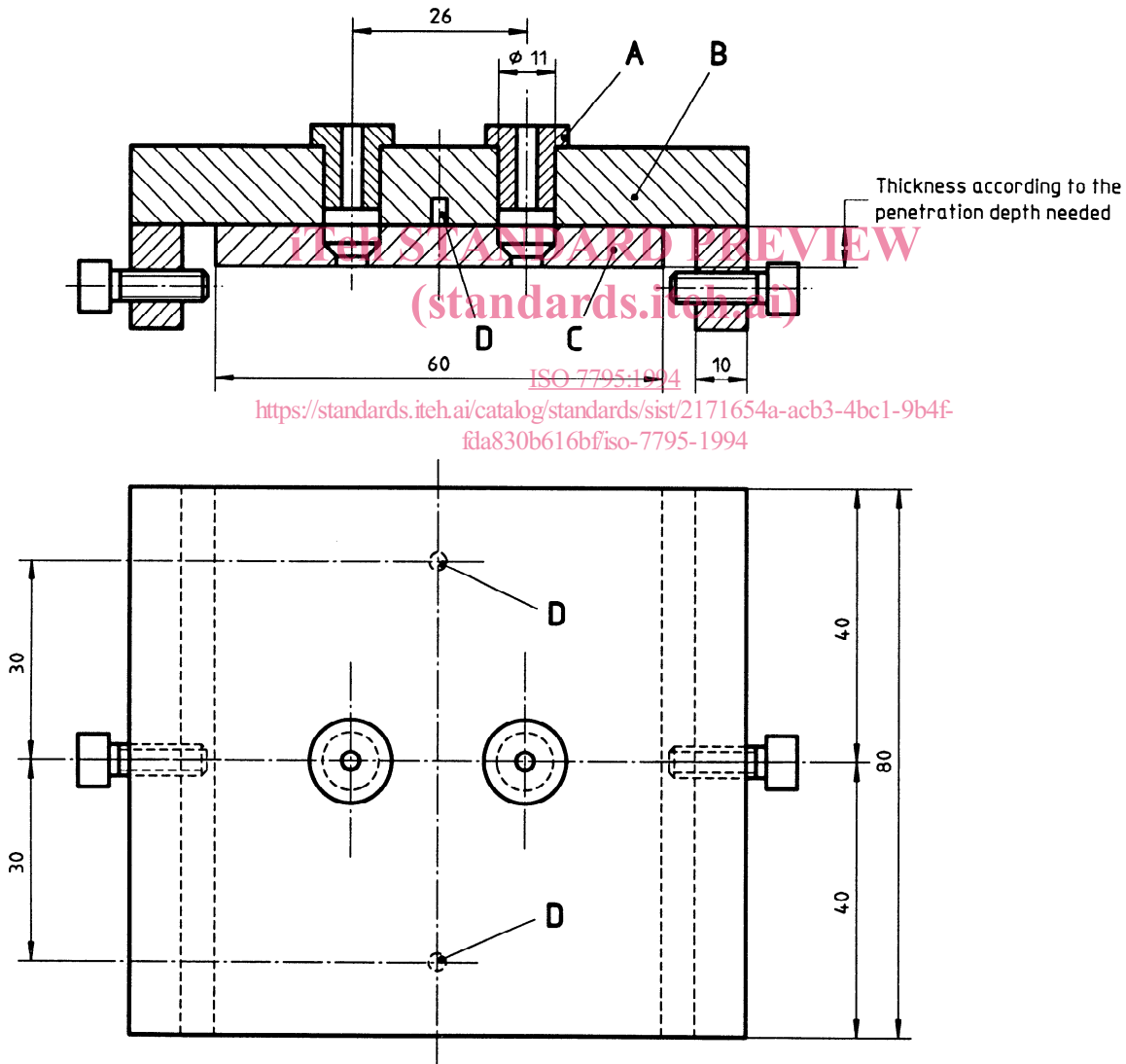
5.1.2 Drive the screw to be tested into the hole using the test jig and a suitable torque-wrench screw-driver. The driving speed shall be less than 0,25 turns per second. Read the driving torque after each half rotation.

No lubrication shall be used during this procedure and the maximum penetration without contact of the screw head and the friction plate shall be 9,5 mm.

5.1.3 Record the maximum driving torque, in newton metres, as the largest measured value of the torque applied during the driving procedure.

5.1.4 Repeat the test, using at least 10 different screws of the same type.

Dimensions in millimetres



- Key**
- | | | | |
|---|-------------------|---|--|
| A | Drill jig bushing | C | Friction plate |
| B | Drill jig | D | Centering pin to locate the friction plate |

Figure 1 — Drill and test jig

Dimensions in millimetres

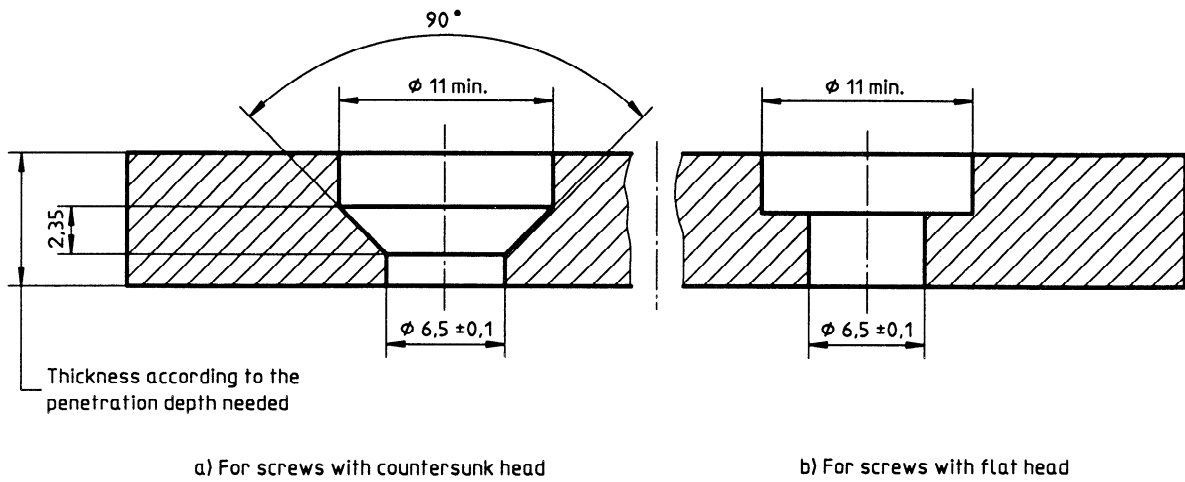


Figure 2 — Friction plate

5.2 Determination of stripping torque

5.2.1 Using the drill jig (4.2), drill a hole of diameter 3,6 mm H12 ($+0,12$ mm) and depth 10,5 mm ($+0,5$ mm) in the test assembly (4.1). The hole shall not be tapped.

5.2.2 Use the test jig to mount and tighten the screws. Apply an increasing torque with the torque-wrench screwdriver until a drop in the torque resistance indicates failure of thread.

5.2.3 Record the stripping torque, in newton metres, as the maximum value of the moment read on the torque-wrench screwdriver.

5.2.4 Repeat the test, using at least 10 different screws of the same type. Use a new hole of the friction plate for each test.

5.3 Static pull-out test for one screw

5.3.1 Using the drill jig (4.2), drill a hole of diameter 3,6 mm H12 ($+0,12$ mm) and depth 10,5 mm ($+0,5$ mm) in the test assembly (4.1), ensuring that the holes are at least 50 mm apart. The hole shall not be tapped.

5.3.2 Use the pull-out apparatus (4.3), which allows the introduction of the screw perpendicular to the surface of the test assembly to a penetration depth of 10,5 mm, and an axial load of the screw perpen-

dicular to the surface of the assembly during the pull-out test.

Drive and tighten the screw with a tightening moment of 3 N·m.

Position the test assembly so that the tested screw is equidistant from the support rolls.

5.3.3 Apply an axial load at a rate of 20 mm/min, until the screw is pulled from the test assembly. Record the maximum load required.

5.3.4 Repeat the test, using at least 10 different screws of the same type.

6 Test report

The test report shall include the following information:

- a reference to this International Standard;
- name of the manufacturer or sign;
- designation of type;
- the maximum driving torque;
- the maximum stripping torque;
- the maximum pull-out strength;
- any deviation from this International Standard and the reasons for this deviation.

Dimensions in millimetres

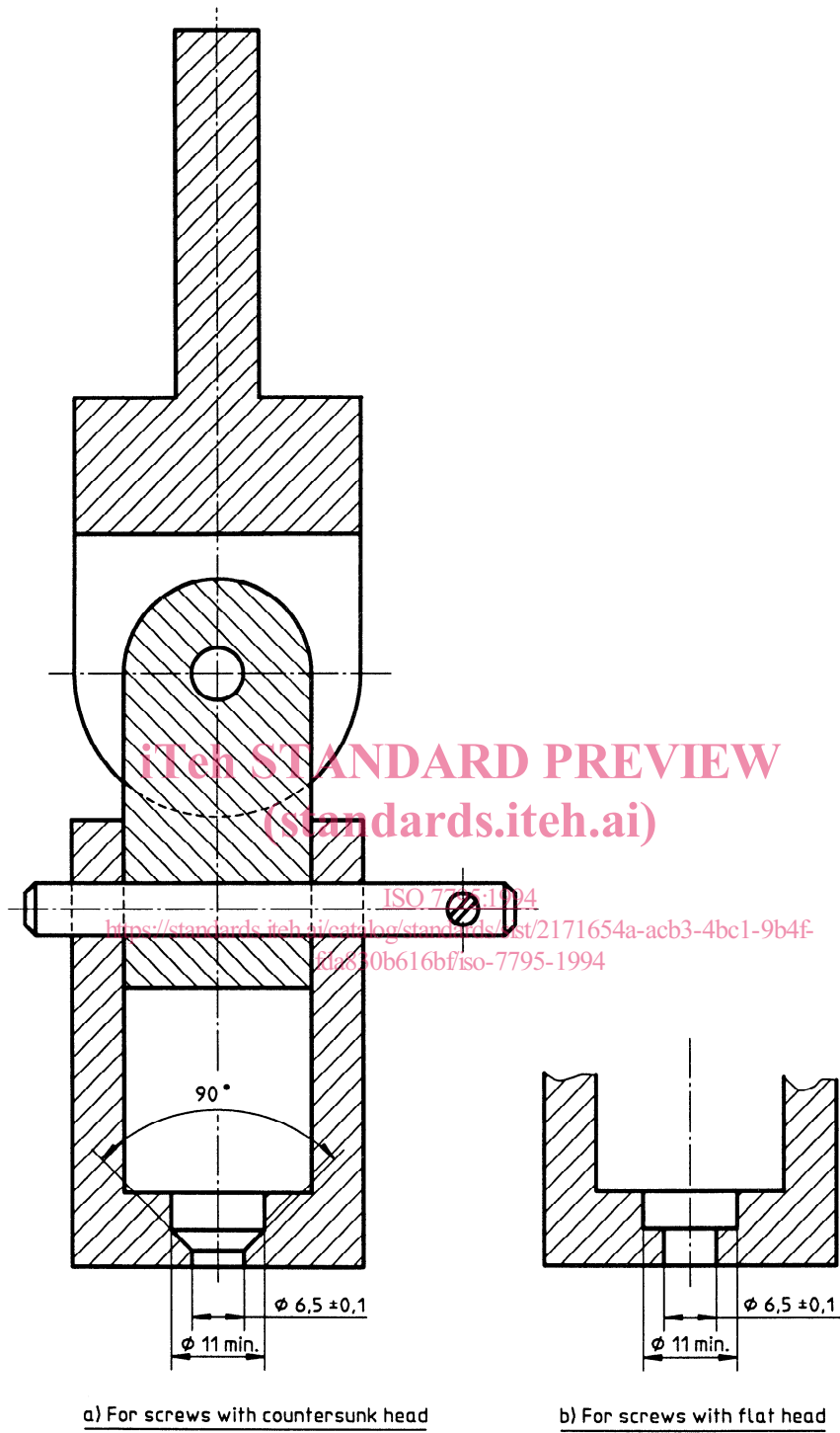


Figure 3 — Pull-out apparatus

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