
Alpine skis — Binding mounting area — Requirements for test screws

*Skis alpins — Zone de montage de la fixation — Spécifications des
vis d'essai*

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 83, *Sports and other recreational facilities and equipment*, Subcommittee SC 4, *Snowsports equipment*.

This second edition cancels and replaces the first edition (ISO 10045:1991), which has been technically revised.

Introduction

The use of test screws ensures the comparability of measurement data, which are determined by the manufacturer or other institutions by testing the binding mounting area of alpine skis.

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Alpine skis — Binding mounting area — Requirements for test screws

1 Scope

This document specifies the dimensions, mechanical properties and fastening characteristics of test screws used for testing the binding mounting area of alpine skis.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1478, *Tapping screws thread*

ISO 4042, *Fasteners — Electroplated coatings*

ISO 4757, *Cross recesses for screws*

ISO 6004, *Alpine skis — Ski binding screws — Requirements*

ISO 6005, *Alpine skis — Ski binding screws — Test methods*

EN 10084, *Case hardening steels — Technical delivery conditions*

3 Terms and definitions

For the purposes of this document, the definitions given in ISO 6004 and the following definition apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

test screw

fastener, which is used for testing the binding mounting area and for ensuring the comparability of measurement data

4 Designation

Designation of a test screw according to this document with a nominal diameter of 5,4 mm and a length of 12 mm:

- test screw ISO 10045 — TBS 5,4 × 12.

5 Requirements

5.1 General

The strength requirements and typical application characteristics shall be tested according to ISO 6005.

5.2 Materials

C15E (steel grade number 1.1141; Brinell hardness 143 HBW) according to EN 10084 shall be used.

5.3 Dimensions

5.3.1 Screw head

Test screws shall

- have a maximum head diameter of 10 mm, and
- be cross-recess type Z No. 3 according to ISO 4757, with a recommended penetration depth of 2,72 mm to 3,18 mm.

The bottom side of the head shall be coarse-toothed (see [Figure 1](#)).

5.3.2 Thread and end configuration

The cross-section of the screw may be circular or non-circular within the major diameter of 5,31 mm to 5,46 mm (see [Figure 1](#)).

The thread length shall be at least 1 mm longer than the penetration depth, irrespective of the shaft length. The tolerance on the length of the screw shall be $\pm 0,5$ mm.

The shaft end shall correspond to [Figure 1](#).

Dimensions in millimetres

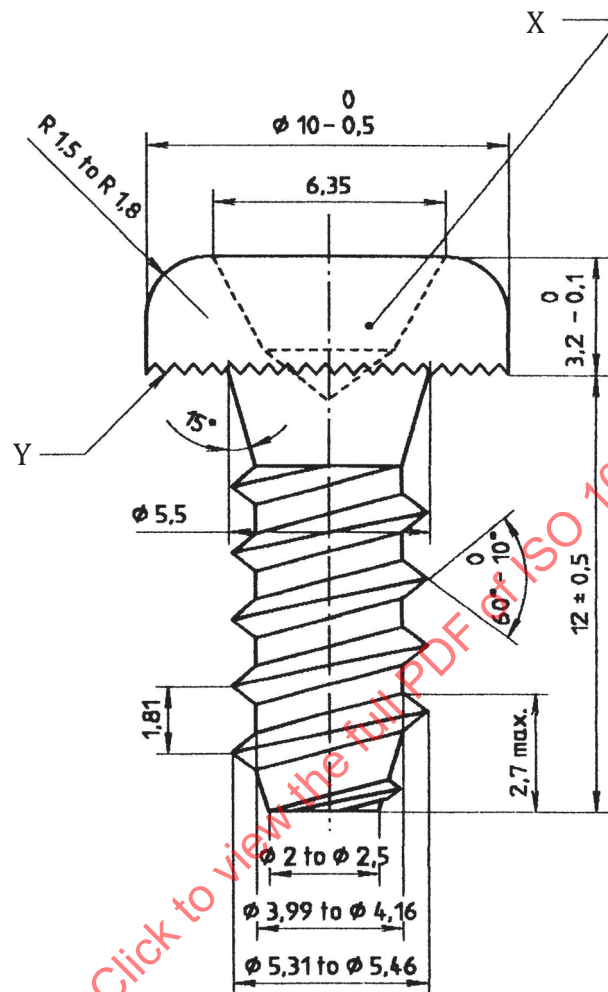


Figure 1 — Head, thread and end configuration

Key

- X cross-recess type Z-Nr. 3 (according to ISO 4757)
 Y coarse toothed

5.4 Surface

Test screws shall have a zinc electroplated coating, Fe/Zn 5c (according to ISO 4042), with a clear chromate conversion coating and a thickness of 10 μm when measured on the top surface of the screw head.

Adequate precautions shall be taken during electroplating to avoid hydrogen embrittlement.

5.5 Strength requirements

5.5.1 The breaking moment for test screws under a torque of the same axis and direction as the driving torque shall be not less than 10 Nm.

5.5.2 When subjected to the ductility test, the screws shall not break.